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THE

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~~WESTERN~~

HORTICULTURAL REVIEW:

" *and botanical magazine.*

DEVOTED TO

HORTICULTURE, POMOLOGY, GRAPE CULTURE, WINE MANUFACTURE,
RURAL ARCHITECTURE, LANDSCAPE GARDENING,
ENTOMOLOGY, METEOROLOGY, ETC.

J. A. WARDER, M. D., EDITOR.

VOLUME I.

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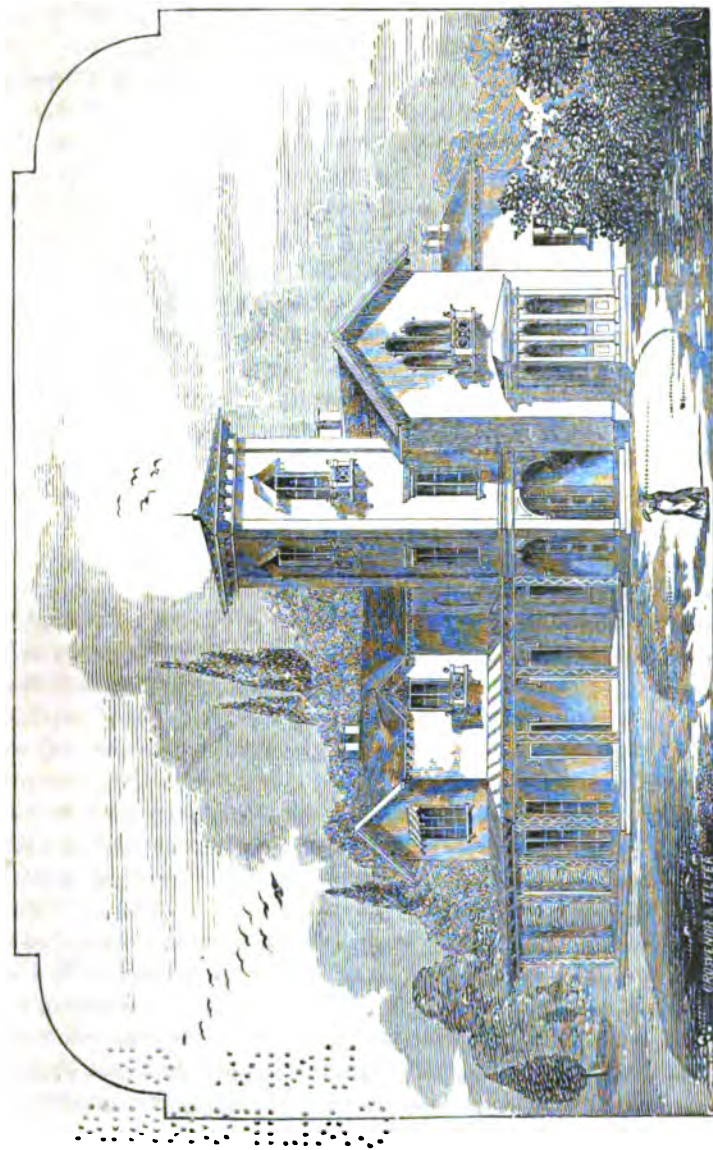
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Vol. I.

OCTOBER, 1850.

No. 1.

THE EDITOR'S SALUTATORY.

To the Horticulturists of our country I present myself, asking their countenance, their aid and their support. The appeal is made to all "to whom these presents may come," but especially to the inhabitants of the great "Interior Valley," a region of vast extent, with varied soil and climate, and peopled by a race who well know that the labor of their hands is never so successful as when rightly directed by the intellect of the head. To these I now address myself, fondly trusting in their intelligence, and hoping that my efforts to diffuse useful information among them will be rendered abundantly successful by their hearty coöperation.

It is with becoming modesty, you may rest assured, but not with trembling diffidence, that I make my debut upon this interesting field of action: my seniors in horticultural pursuits need not apprehend they are to meet an upstart who will dogmatically attempt to teach them the first principles of their delightful art; to all such the open portfolio is extended cheerfully and with the entreaty, give us your knowledge, spread it out upon these pages, enabling the editor to be better

qualified for the task of instructing others less experienced, and thus render the Review the happy medium of conveying instruction from one to another.

Think not, *old gardeners*, that your friend, (for your friend he is determined to be and has long been, whether known or unknown,) think not that he is wholly unprepared, or that he is disqualified for the task assumed, because he has long been laboriously occupied in another calling, one which ever requires intense application and study, for, during all those years so occupied, his great pursuit has been VITALITY, and the study of the laws which govern it in health as well as disease; these laws are ever found to be illustrated and elucidated by the charming study of comparative physiology to which the true student of natural phenomena gladly appeals for aid in his attempts to unravel the tangled web and decypher the mystic characters that appear upon those pages of the great book of nature, wherein are written the mysteries of LIFE. Early was I captivated with this most interesting branch of study, and constantly resorted to this garden of nature, not merely

for aid in the explanation of other phenomena, but also as a most delightful resource to relieve the weary mind borne down with anxiety and care. Though not "born in a garden," a fond parent may be said to have transmitted to her offspring an ardent love for what had been an object of deep interest to herself, and a similar attachment to rural pursuits certainly developed itself at a very early age. "*My little garden*" forms the scene of the earliest recollections of childhood—and ever since, the soil and its productions have afforded the most delightful recreation from severer studies and more arduous pursuits. Happy the man who is blessed with similar tastes and an opportunity of pursuing them!

Having, I trust, satisfied the *old gentlemen* that I am not wholly disqualified by birth and education from sympathizing with them in their horticultural joys and sorrows, let me turn to the *juniors*, whose successes and disappointments in horticultural experiments may be feelingly appreciated by one who has had no little practical experience in the same employment. To them, the pages of the *Horticultural Review* shall be ever open for details of the results of their efforts, as well as for a medium through which they may ask questions of those more experienced than themselves, and there is no doubt that by such a course they may be saved many a disappointment in the progress of their operations. And now, to both classes and to all I offer an apology for this egotism: it is my introductory; we were strangers, most of us, let us now be friends mutually aiding one another:—You, as readers, contributors and subscribers, I, the editor, who is to cater for your wants.

In this "age of progress," (as it has been so often styled that we are disposed to believe it is really so,) it were a work of supererogation to attempt a logical proof of the advantages of books and reading to those

engaged in any department of useful labor—their necessity is so apparent and has been so freely admitted by every one qualified to judge, that no argument is needed; but some of the reasons why "*The Horticultural Review*" should now make its appearance and ask to be read and supported may be expected and shall herewith be set forth.

The great "Interior Valley," embracing within its range some of the best soil of fifteen sovereign states, extending over thirty-five degrees of longitude, from the Alleghenies to the Rocky Mountains, and twenty degrees of latitude, from the great lakes on the north with a frigid winter and rapid summer, to the shores of the Gulf of Mexico with its genial clime, offers indeed a wide field wherein to labor, and that field is unoccupied by any journal devoted exclusively to horticultural and kindred pursuits. This great valley is fast filling up with an intelligent population; in proportion to their advance in civilization and improvement, horticulture claims more and more attention—and we may observe every where an extension of the taste for this delightful art among amateurs, as well as an increase of intelligence among the professed gardeners, those who wield the spade and hoe. This taste must and will be gratified and only asks the determination of our fellow-citizens to carry forward this enterprise; for it is a *home* journal that is especially needed. Hundreds are regular readers of the two excellent periodicals of the Eastern States, and should continue to be so, but in a country so differently situated as the "West" is from the "East," there must be a thousand peculiarities, especially of soil and climate, which materially modify the practice to be pursued in any given case. It is a constantly repeated observation among gardeners, that every stranger coming to this country from a different region, how well qualified soever he may be, is obliged to

study first the climate and soil before he can succeed or compete with those who have preceded him: this is most remarkably the case in the cultivation of certain families of plants, in which we often see failures in the hands of men who have brought with them, beside a general high recommendation, especial reputation in the cultivation of these species.

Throughout the west, the bright example of a few enterprising horticulturists of Cincinnati, has been happily followed in many of the leading towns; several societies have been formed for mutual aid and encouragement, and it is to be hoped that everywhere these institutions may continue to prevail, and that their influence and effects may everywhere prove as highly advantageous, not only

to the parties immediately concerned, but to the community at large, as is universally admitted to be the case with the young western mother at Cincinnati. All these societies and all the numerous progeny which is sure to follow, are now without any congenial medium of communication, and are indebted to the newspapers of the day for notices of their good deeds. Here, then, is a cogent reason why we should have a horticultural journal, and, obedient to the call, or even ready to anticipate it, *The Western Horticultural Review* steps modestly forward to fill the void, until some more highly gifted or more favored journal shall be found, better able possibly, but not more willing nor more anxious, to serve as the organ of these associations.

LETTER FROM A. H. ERNST, PRESIDENT, ETC.

DR. WARDER,

Dear Sir—Aspiration, if rightly directed, is the noblest element of the human mind. The purest and holiest principles are its field of action, it encounters every difficulty to accomplish the elevation and happiness of man. A few years since, within my own boyish recollections, the spot on which I now write was a wilderness, unbroken by the hand of civilization. What has wrought the change? What is it that has made the desert blossom as the rose? Aspiring after enjoyment and happiness, is the answer.

I was led to the above reflections, sir, on seeing your prospectus for issuing a periodical devoted to *western horticulture*; my heart gladdens with the review of the past and with the prospect before me, and I could not but indulge the hope that your aspirations are not too high in promising a periodical that "shall merit support by being equal, if not superior, to any horticultural journal in the country." In your success I am sure you

will have the hearty concurrence of every benevolent mind, but especially all such as are devoted to the objects it is designed to promote. The time for commencing your work is most auspicious. *In all the vast regions of the West there is not at this time a journal devoted exclusively to horticulture.* The reason of the delay in presenting such a work, may not appear satisfactory to the casual observer, suffice it to say that at different times and in different places, efforts have been made to supply the vacuum by issuing periodicals of a cheap character and mostly devoted to other objects, which have failed, owing to their price, and not meeting the wants of enlightened horticulturists.

The respectable journals exclusively devoted to this subject, are located East of the mountains, where the soil and climate materially differs from ours, consequently are not adapted to our wants. This becomes more and more apparent at every step our practical operators take. The spirit of western pro-

gress demands a journal that shall take rank with the leading ones elsewhere. Within a few years numerous societies, having for their object the promotion of this interest, have been organized and are making successful progress, and this without an organ to record their doings. It is true the papers of the day have from time to time made honorable mention of their existence and doings, but this is not all that is wanted,—a more permanent and full record is necessary.

The rapidly growing cities of St. Louis, Burlington, Io., Louisville and Lexington, Ky., Nashville and Vicksburg, Tenn., Pittsburg, in western Penn., Columbus, Cleveland, Dayton and Steubenville in Ohio, with our own city, now number among other institutions, their active horticultural societies. It seems appropriate that the oldest of these sisters (if not the mother of the rest) should take the lead in giving its support and patronage to an organ in whose benefit all may participate.

The object I have in view, Mr. Editor, in writing this article, is to call the attention of these societies and individual horticulturists, *with others*, to the subject of a more united action. All feel and acknowledge the happy and salutary influence exerted on the morals, by their operation, and the improvement and more abundant supply of vegetables, fruits, flowers, etc., also the promotion of good taste generally in the community in which they are located. It is, however, left to the practical operator to contend with the embarrassments surrounding him, resulting from the want of adaptation of works written for other climes, on which he has been accustomed to rely, leaving him to learn anew what he supposed himself possessed of. The character and ability of many of our eastern writers and cultivators are of the highest order and entitled to our greatest respect. This is especially applicable to the sterile and rock bound region of New England, with its unpro-

pitious clime, which has by perseverance, great skill and industry, been really subdued and converted into fruitful fields and delightful gardens, abounding with the luxuries of other and more congenial climes.

Nature has highly favored and done much for us, but she has also left much for us to do; to fully enjoy our advantages we must learn for ourselves. She has given us a soil and climate unsurpassed, but she has left it to us to adapt the fruits of other climes to them. She has left it to us to discover the cause of, and a remedy for the fire blight which is so destructive to our pear trees. She has left it to us to discover the cause of, and a remedy for the destruction of our fine cherry trees, with enough else fully to employ our united talents during our day and generation. We must then learn for ourselves. This can in no way be so effectually done as by union and concert of action. May I not then, sir, urge the necessity of a *western horticultural alliance*, and that without producing or incurring the odium of engendering sectional feelings and animosities, but simply to pursue the laudable example set us by our less favored brethren. I think all will agree that this may and should be done. It is required not only for ourselves, but community has a right to demand it at our hands.

Permit me to refer to another branch of this great subject, which is just now attracting much attention all over the country, that of pomology. Here the effects of soil and climate are so manifest, that the most shrewd observers are in very many instances unable to recognize their old acquaintance when transferred to and grown in our western region. The consequence is the greatest confusion and embarrassment, except with a few sorts that have grown with our growth and ripened with our years. This must be remedied. But the question will probably be asked, how is this to be brought about? Let

me point to the good effects of several meetings of fruit growers held in our own State, with specimens, to compare and discuss their merits; let that system be extended to a wider range, until it embraces the whole West; by it cultivators become acquainted with each other, and by comparisons, learn the real merits of fruits, and also, often to their surprise, they will find that not a few of them are cultivated under twenty or more names applied in different localities to the same fruit. It is by frequently coming together and freely discussing these matters, that light is diffused and knowledge gained by all who participate in them, which will be spread abroad to benefit the community. This embarrassment is so generally felt, that it has attracted the attention of the most intelligent pomologists of the land and called them together in a national convention to cor-

rect the evil as far as may be. Two sessions have been held in the East, and the next meeting, under the title of *American Pomological Congress*, is appointed to be held in our city on the 2d, 3d and 4th days of October.

To make it what its founders designed it to be, it is of the utmost importance that it should be well attended with a full representation of our western fruits. Societies and individuals should not fail to see to it. Such an occasion for obtaining information can not often occur to western cultivators; here they will have an opportunity of seeing fruits from the whole Union, including the Canadas.

With your leave I may at a future time again refer to the subject of concentrating action upon these important matters.

Very respectfully yours,

A. H. KANSZ.

Spring Garden, Cincinnati, Aug. 28, 1850.

THE VINTAGE.

Our vineyards will give an abundant yield this season, and wine will be a dull sale, and at a low price, unless of the best quality. In former years, so little wine was made, that anything called Catawba Wine, met a ready sale. I bought old Catawba wine a few days since, at twenty-five cents per gallon, and a hard bargain at that price. A part of it, to make brandy, and a part, fit for vinegar only. As usual, the grapes had been gathered too soon; casks not kept full, nor in a cool cellar. In the manufacture of wine, no skill or experience is necessary, as nature does all, if great neatness is observed. All my tenants but one, (Mr. Schneicke, in the Garden of Eden,) are old vineyard men. He is a worker, and a man of strong common sense, close observation, and unusual neatness. His vineyard is a pattern for all vine dressers, and his wine of superior quality. His wine of last vintage,

he sold from 75 cents to \$1 per bottle. I myself bought of him at that price. His must weighed 96. He began making wine last year, early in October, and finished about the 24th. Being from two weeks to a month later than most others.

Our last spring having been cold, our grapes will ripen, I think, two weeks later than usual, and our vintage should be governed by it. I discover in some of our vineyards, the leaves are turning yellow, and dropping from the vines; the wood is ripening prematurely; the sap ceases to flow, and the grapes will not ripen well, and the wine will not be of the first quality. This is the case at one of the vineyards in Eden. It is occasioned by topping the shoots too soon, and the weather being dry, instead of forcing out the fruit buds of next year, as is generally the result, it caused a ripening

of the wood. Other tenants were following his example, and I advised them and him of the probable result. Such is the practice in many of the wine districts in Europe; and our Germans must do "just so as we did in Germany." Not having our hot sun, they thin out the leaves, and top the shoots, to let in the sun to ripen the wood and fruit. Our grapes require the shade of the leaf. And if the growth be stopped, and the wood ripened by topping, the sap ceases to flow, and much of the fruit never ripens. Every vine dresser should have one of Mr. Rehfuess' saccharometers. Of the full maturity of the Catawba grape, no certain opinion can be formed from the color. When deemed fully ripe, a tumbler of juice should be pressed out, and weighed. To make wine of great richness, aroma and flavor, it should weigh from 95 to 100. But there are seasons when the bitter rot, or other causes, compels an early vintage. There are also seasons when the sap ceases to flow, or the grape to ripen. Where this is the case, no delay should take place. If the must did not weigh eighty-five, I should add the best crushed loaf sugar, and bring it to 96 degrees. The sugar will give the strength to the wine, and insure its keeping; but can not give aroma and flavor.

Where a saccharometer is not to be had, the old test is a fresh hen's egg. If the juice be not rich, the egg will sink. If it rises above the surface, showing the size of a quarter of a dollar, the wine may be made.

In gathering the grapes, begin as soon as the dew is dried up. Carefully pick out all rotten, green, and defective grapes. Have your press clean, and press the same day. If the grapes are not very ripe, I should give them a thorough mashing. The color and aroma is in the skin. If fully ripe, a fermentation in the berry brings both out. I should, at the bottom of the pounder, tie a piece of cotton, so as to insure the mashing

of the skin without breaking the seed. The next thing is to have a clean press and a clean cask. A late writer, professing great skill, recommended mashing the fruit in a fresh whisky barrel. This would effectually destroy the flavor and aroma of the wine. The next, a clean cask, with no taste from brandy or wine, unless it be the Catawba. I should put the last fourth or fifth of the pressing in a separate cask. In the wine countries of Europe, the last one-third is kept separate; and I doubt not, the wine is the better if one-third be separated. The last pressing has most color and leaven, but the least sugar. Place the cask in a cool place; have a crooked syphon inserted in the bung, and the other end of it in a pan of water, into which the gas can pass. When the fermentation abates, put in the bung tight, and give air from a gimlet hole two or three times a day, till all air can be excluded. As soon as clear, rack into clean casks, and thereafter always keep the casks full. I would recommend all persons not having cool cellars, to sell their wine as soon as it is clear. In Europe, the wine of one vineyard, bearing the same grape, and separated from one adjoining by a narrow path, will sell for four times the price of the other. This, they profess to say, arises from a difference in the soil. It is from the great care in the manufacture. As an evidence of it, a vineyard of inferior character, in the charge of a skillful tenant, in a few years ranks with the best. The wine of a vineyard of high character, in a bad season, is never sold as the production of that vineyard. As a general rule, I do not wish to buy the wine from the press, unless I have previously tasted the wine of former years, though I sometimes do it. I can, when the grapes are ripe, judge what the quality of the must and wine should be. But so much depends on the picking out of all rotten, decayed, and green berries, clean press, cask, etc., that the

wine, when fermented, will greatly vary in character. The first vintage, only the ripest bunches should be gathered. Those less ripe, a week or ten days later, by which time the fruit may be so-ripe as to make a wine equal to the first, if equal care is exercised in picking out all bad grapes.

The rejected grapes, of both gatherings, may be made into a wine of inferior quality, by adding about ten ounces of good brown sugar to the gallon.

N. LONGWORTH.

P. S.—I should have warned cultiyators against a great evil. Some of our German vine dressers are so anxious to make money, that they leave one-half more bearing wood than the root can support. The first result is, an immense crop of grapes. The final result, no good bearing wood for the next year,

as the sap is taken up by the fruit, and the whole vineyard ruined. Further, there is not sap to ripen all the fruit. A part remains green, and a weak wine is made, only fit for vinegar. I grafted six roots, last spring a year; three of the vines grew very large and long. Anxious to test the quality for wine, I left double the bearing wood on the large plants my judgment dictated, and pruned the other three down. I hoped a favorable season might ripen the fruit. The recent cool weather has been unfavorable. Where little wood was left, every grape is black, and nearly ripe. On the other vines, half the grapes are yet green, and the fruit dropping from the bunches.

Give us your views, if not on the Rochester Knockings, on the production of apples on grape vines.
N. L.

CATAWBA GRAPE—ITS HISTORY.

THE origin of the Catawba Grape, which has of late become an object of great interest to the horticulturists and farmers of this country, has long been a subject of curious inquiry; but never, till lately, satisfactorily ascertained. Although it has been known by the name of the Catawba Grape, for thirty or forty years, in a few gardens, no one has been able to locate the spot where a single vine of this description could be found growing in its wild state. Recently, however, I have ascertained, through Dr. Solomon Beach, of Hamilton county, O., a gentleman of veracity and acute observation in such matters, that he first saw this identical grape growing in its wild state, in the elevated and mountainous regions of North Carolina, in Buncomb county, about ten miles south-easterly of Ashville, in the summer of 1821, without then knowing its name, and long before it was introduced into Cincinnati.

In that year, he informs me, he made a journey from Cincinnati to Chester court house, in South Carolina. After passing the Tennessee line into North Carolina, and traveling up French Broad river to Ashville, he found plenty of grapes of a black color, some of which were very good, growing on small trees, along the rivulets running down from the mountains into the river. Leaving Ashville, and traveling about ten miles on the main road from Tennessee into South Carolina, he stopped at Col. Murray's, who kept a house of entertainment, and had been a long resident there.

Having found wild grapes so plentiful along the road, and in considerable variety, he inquired of the family if any good grapes could be obtained there, as he was particularly fond of them, and they were then ripe. Mrs. Murray, in reply, said they were very plenty, and that there was one kind of uncommon excel-

lenes, growing along a stream in front of the house, which runs into the Catawba river, and pointed to one particular vine, running over a small oak tree, in sight of the door where he stood. He went to the tree and found plenty of grapes, which he describes as of "a reddish color, with a purple, dusky appearance; the taste sweet and pleasant, with a peculiar, agreeable flavor." On returning to the house, he had much conversation with the family about them. They told him they had long known them in that neighborhood, and that they had sent cuttings and roots of the same to many of their friends, in different parts of the country.

Dr. Beach describes the locality as being nearly on the summit level of the Blue Ridge, dividing the waters of French Broad from those running into the Catawba river; the country mountainous, and thinly timbered, with short shrubby oak and hickory; the soil poor, with many loose stones and gravel. He says the locality can be easily recognized, if the Murray family are gone, as it is about ten miles from Ashville, on the main road, which forks just beyond Col. Murray's house—one branch passing through Saluda Gap, into Georgia, and the other through Mills' Gap, in the Blue Ridge, to Chester, in South Carolina. Along this last road he pursued his journey to Chester court house, where he stopped with his friend John M'Kee, silversmith and merchant, who had for a long time resided there. To him he related the circumstance of finding so peculiar and excellent a grape, growing wild, near Col. Murray's. Mr. M'Kee took a memorandum of it at the time, in consequence of a circular he had received, a short time previous, from Mr. Herbemont, of Columbia, S. C., requesting cuttings and plants of good native grapes. Mr. M'Kee informs me, by letter, that he wrote immediately to Herbemont, informing him of this grape; but whether he obtained it or

not, he does not know; and I can not learn that he had it in his possession till he obtained it from Major Adlum, in 1829.

There were several families of Murray, residing in the same neighborhood, who emigrated from Maryland, and were all well acquainted with this grape, and, it is quite probable, sent it to Mr. Schell, of Clarksburg, Montgomery county, Md., from whom Major Adlum obtained it, by the name of Catawba grape.

Several varieties of grape have been discovered, in distant parts of the United States, resembling the Catawba in color; but all, I believe, are inferior in size and flavor. In confirmation of the account given me by Dr. Beach, is a letter in my possession from Mr. M'Kee, dated in 1848, in which he says he has two or three times since visited the vine near Col. Murray, and eaten of its fruit, and has one growing in his own garden, in Chester; but thinks the flavor has not improved by transplantation from the native soil. Dr. Beach expresses the same opinion.

This grape, now so popular, had attracted very little attention till it was first discovered, by Major Adlum, of Georgetown, D. C., that it would yield an excellent wine; since which, it has been eagerly sought and extensively disseminated throughout the United States, and has also been recently transplanted into France and Germany.

By making this discovery, Major Adlum said "he had conferred upon his country a greater benefit than if he had paid the National Debt."

The habits of this vine would seem, also, to indicate its original locality, as given by Dr. Beach; for it delights in an elevated situation, and in a dry, porous soil, of moderate fertility, and appears to succeed better in Kentucky and southern part of Ohio and Indiana, than in any other section of country where it has been tried. Here it is cultivated

with most success on the sides of the crumbly limestone hills, bordering the valley of the Ohio river and its tributary streams, in loose, light, porous soil, where rains do not remain long about the roots, and where there is a free circulation of air. In rich alluvial bottoms, and in level clayey uplands, retentive of moisture, it will not flourish for a length of time—the fruit is more liable to rot, and its juice of a more harsh and austere character, and will never make a fine aromatic wine.

In the southern part of the United States, in all that level country bordering upon the Gulf of Mexico, it is short lived. It grows most luxuriantly, and bears abundant crops, for two or three years, and then dwindles and dies. It can never succeed as a wine grape in that region; but would, probably, do better in the mountainous districts of Georgia and Alabama.

In the northern states it is too tender—being often killed to the ground in winter, and the summers too short to ripen its fruit.

The best climate for the production of good wine, in this country, is embraced between the 34th and 39th degrees of north latitude,

including some of the best lands for the purpose, perhaps, to be found on the globe; and there is little doubt that fifty or sixty years will give it a character, for excellent wine, surpassing any country in Europe.

North of this parallel, with some exceptions, perhaps, no pure wine can be made from any variety of grape that will keep, as the heat is not sufficient to produce the requisite saccharine matter in the fruit; and south of this southern parallel, although there may be enough of saccharine in the grape to make the best of wine, yet the time of ripening is so early, and the weather so hot, that the fermentation can not be restrained within proper limits without the addition of alcohol, or sugar, by the fermentation of which alcohol is generated. Even in the neighborhood of Cincinnati, which is near the northern boundary of what I consider the wine zone, the Catawba grape must be well ripened, and all imperfect berries carefully picked out, and then properly managed during fermentation, to secure a perfectly pure, dry wine, that will keep and continue to improve by age.

S. MOSHER.

Latenia Springs, Ky.

NECTARINE AND PEACH.

To the Editor of the Western Horticultural Review:

SIR—Permit me to congratulate the western public on the advent of your new "Review." Such a work has long been needed, and yours will supply to the horticulturists and agriculturists of the vast country west of the Alleghany mountains a desideratum in those pursuits. But, sir, as well pleased as I am at the forthcoming of your Review, my object at present is not so much to present my congratulations, as to furnish you with another evidence of the freaks of dame nature, as displayed in her horticultural fecundity.

In Mr. Downing's "Horticulturist" for July last, evidence is furnished, of a most conclusive character, that a single peach stone produced two trees—one of which has borne peaches, and the other nectarines. The brief history of these productions is interesting and curious: interesting, as showing that a seedling in a city garden could produce a peach weighing fourteen ounces; and curious, that a seed from that seedling should produce two distinct varieties of the same species of fruit.

In commenting on the testimony thus fur-

nished, Mr. Downing states the well known fact, that "there are cases on record, in the Transactions of the Horticultural Society of London, of both peaches and nectarines growing, naturally, on different branches of the same tree." He adds, "Our friend Longworth, of Cincinnati, denies, flatly, the possibility of such a thing as a peach stone producing a nectarine tree." And here comes the object of this brief epistle. In company with Mr. Tanner, late editor of the Kentucky Yeoman, Mr. Conery, an amateur horticulturist of no inconsiderable attainments, and other gentlemen, I paid a visit, about the first of this month, to the orchard of my friend, Mr. J. Riden Hart, of this county. We there found a large flourishing peach tree, bearing peaches in abundance, and one large limb of which was bearing very fine sized nectarines. There was no doubt about the tree and limb being the product of a single stone; for the limb which bears the nectarines—not a few, but dozens—also had peaches side by side, on alternate branches of the same limb, with their beautiful, smooth-skinned relatives.—This tree has been seen by many visitors, and there is no mistake about the facts; so that Mr. Longworth will have to yield his opinion to the statement of incontrovertible truths.

Allow me to state, that Mr. Hart has a variety of fruit, consisting of peaches, pears, plums, nectarines, apples, grapes, etc., among which are many rare kinds, of all varieties, the quality of which would extort the admiration of almost any fruitier. And it affords me pleasure, also, to state, that many gentlemen in this part of Kentucky are devoting a good deal of attention to the improvement of their orchards, gardens, and pleasure grounds; and in a few years will do as much as the climate will permit to rival, in the excellence of their varieties, the best fruitiers of the north.

Very respectfully,

R. CARMICHAEL.

P. S.—I am very sorry that the Cincinnati Horticultural Society has postponed its meeting till the 1st, 2d, and 3d of October, as the Lexington Horticultural Society's exhibitions are on the same days; the consequence of which will be, that not one from this section of Kentucky will be at Cincinnati; and I know that it was the intention of all persons interested in horticulture to be there, if the time had not conflicted with their own exhibition at Lexington. In fact, they put back their exhibition from the 17th of September to the 1st of October, in order that they might be able to attend at Cincinnati on the 11th, 12th, and 13th of September. Now it will be impossible for them to attend.

R. C.

Frankfort, August 24, 1850.

REMARKS.

The above communication being from a practical nurseryman, the objection which might be started to this remarkable relation will have less force than if the account were from a person unaccustomed to scrutinize the knife-marks and other evidences of the branch having been inoculated with nectarine buds, so as to produce the double crop—a casual observer might have overlooked these things; but a practical gardener would have detected them—besides, another practical nurseryman has since seen the tree, and informs me that no traces of inoculation could be discovered. Strange as it may appear, that one tree should produce two fruits, we must recollect that the two, (the peach and the nectarine,) are very nearly allied, if not the same species; in fact, we are frequently at a loss to say what constitutes a species; and a long course of experiments is necessary for the proper solution of the problem. Many writers consider them rather as varieties than as distinct species. The French even call the nectarines *Pêches lisses*, or smooth peaches. Admitting that

the species is identical, the greatest difficulty in my mind is, that, even as a *variety*, they should occur upon the same tree. Such accounts have previously been laid before the public, not always well attested, and, as we have no positive evidence to the contrary, and only our previously conceived notions to give up, let us be willing to receive new light from the observation of natural phenomena, how wonderful soever they may appear, even if we mark them in our calendar for the purpose of a more thorough investigation.—ED.

ON THE PRINCIPLES OF LANDSCAPE GARDENING.

GARDENS and buildings, Lord Kames observes, may be destined for use solely, for beauty solely, or for both; such variety of destination bestows upon these arts a great command of beauties, complex not less than various. Hence the difficulty of forming an accurate taste in gardening and architecture; and hence that difference of wavering of taste in these arts, greater than in any art that has but a single destination. (*Elements of Criticism*, vol. 2, p. 431.)

MASON says it is an art

“Which teaches wealth and pride,
How to obtain their wish, the world’s applause.”

As regards the modern style of Landscape Gardening, POTT has included the principles under three divisions:

First. The study and display of natural beauties.

Second. The concealment of defects.

Third. Never to lose sight of common sense.

WHATELY agrees with these principles, and says the business of a gardener is to select and apply whatever is great, elegant or characteristic in the scenery of nature, or art; to discover and to show *all* the advantages of a place upon which he is employed; to supply its defects; to correct its faults; and to improve its beauties.

HUMPHREY REPTON, whose works on Landscape Gardening have done more (in England) for the advancement of that art than any other author, and who wrote for the pur-

pose of establishing fixed principles in these arts, enumerates congruity, utility, symmetry, scale, proportion, and appropriation, as principles, if, as he says in another place, there are any principles.

G. MASON says the secret of the art lies in the nice distinction between contrast and incongruity.

MASON, the poet, calls in *simplicity* to his aid: *simplicity* is also the leading principle of Lord Kames.

GIRARDIN combines every beauty under *truth* and *nature*; and every rule under the unity of the whole and the connection of the parts.

SHENSTONE says Landscape Gardening consists in pleasing the imagination by scenes of *grandeur*, *beauty*, and *variety*.

UYEDALE PRICE and R. P. KNIGHT say it consists in congruity and the principles of painting.

I have been induced to make these quotations, and the following observations on the principles of Landscape Gardening, by my visits in and around Cincinnati. Here is a country where nature has done so much, and man so little for the *art*. I am well aware I shall be met, on the outset of my remarks, by the oft-repeated observation, of “we are a young country yet; give us the time the English have had, and we will show you what we can do; but I contend this is no excuse for the *many* absurd things we are obliged to see in our perambulations; for, if you are a

young country, you have the experience of those who have lived, and written on these subjects, in England and elsewhere, and they are *legion*. You claim the merit of being ahead of the English in other subjects, and why so much behind them in this? I think I have discovered the principal reason, which is this: the English gentleman, when he proposes making a new place, or any important improvement, generally calls in a practical man, whose skill and experience can be relied on, and he trusts the whole to his superior judgment. In this country *nearly* every person considers himself competent to the task of laying out his grounds; yet perhaps the same person, if about to build himself a house, inquires for the most skillful architect, and employs him, but goes to work himself in planning and laying out his grounds, which in England is considered of equal importance with the house. Many will not grudge to spend from \$9,000 to \$12,000 on a house, who would refuse to spend \$500 on their grounds, which is the reason we see so many badly laid out places. I think it can not be attributed to the want of skillful men in the United States; for, from what I have read in your horticultural periodicals, you possess as skillful men here as in England, if you would only employ them, and give them a *sufficient* remuneration for their labors, without which you can not expect to get such. I think Mr. Quinn, in the July number of the *Horticulturist*, explains this subject better than I am able to do it.

One of the principal errors committed in laying out the places around Cincinnati, is in the disproportion of the parts. Some of the carriage roads are from fifteen to sixteen feet and more in width, and not over three hundred feet in length. You will not find an approach or carriage road in England of this width, *unless* the place is very extensive. The Marquis of Westminster's approach to

Eaton Hall, Norchester, is very nearly four miles in length, and is only fifteen feet in breadth.

Another prevailing error is the width of the garden walks—these are in some of the places far too wide, and in others they are the reverse, miserably narrow. Another fault is in the form and disposition of the groups of trees and shrubs: they seem in some *places* as if they had dropped from the clouds, without any object or aim in view; you see one here and another there, and some planted as if with the design of shutting out the best and most interesting points in the landscape. Another very common error is the mixed character of the grounds: here you perhaps see highly dressed ground, and proceed only ten or twelve yards from the carriage road and you see nothing but coarse, rank grasses and weeds, which might all have been obviated by a trifling expense in a wire or sunk fence, which would have prevented that common annoyance, (in this country,) of cattle coming into your gardens. The cattle might then graze up to your fences, and keep down the rank grass. This could have been done cheaply and permanently, had a competent gardener been consulted, and the place judiciously laid out, and had he been called in before fixing the site for the house; for I consider it a great error to trust to the architect *alone* in this matter. I will grant that some *few* are competent; but, even in that case, it is better to have a gardener along with him, and let them consult together. The architect may know where his house will look the best; but that may be the worst position for the landscape gardener to dispose his grounds, so as to produce the best effects; whilst, by working together, both may obtain their ends.

Architects will sometimes give designs for green houses, and other plant structures. I have seen some of these better fitted for ice

houses than for the growth of plants. They certainly possessed external beauty; but beauty without utility, or adaptation for the purpose intended, is like a house without a chimney. They may, perhaps, say the gardener is not competent to give these designs. I say, that man that is incompetent to do this is not the master of his business; for it is part and parcel of it; but I am aware that many gardeners neglect this important branch of their profession, and will devote their leisure hours to music, novel reading, and other frivolous pursuits. I do not by any means object to music, or any other source of rational amusement, *provided* these are secondary and subordinate to the great purposes of practical life. But the gardener who is conversant with these ought also, (to be consistent,) to be conversant with the leading authors of the day, on the practical sciences connected with horticulture; then these external acquirements become graceful adornments; otherwise, a man with a splendid gold watch, a gold-headed cane, and a pair of old, ragged pantaloons, does not (in *my* opinion) look one whit more ridiculous: he should first be master of his business, or he must be prepared to meet with men who will usurp a part of it.

The heating of green houses, and the choice

of the apparatus, is also sometimes left to the architect, or the gentleman has a notion to try some experiment of his own. This is all right and fair, if the employer will take *all* the responsibility, and, if the plants don't flourish as they ought to do, don't attach the blame to the gardener—when, probably, the fault is in the house or the system of heating it. Visitors will say, "How badly your plants look!" and perhaps there is no explanation given; and when they go away all the blame is attributed to the unskillful management of the gardener; whilst perhaps the architect or proprietor is to blame, for not trying a *little* of the *practical* advice of the gardener combined with their theory. No man should undertake to give designs for plant structures, unless he is practically acquainted with the management of those plants intended to be grown therein.

In some future number I will give you my opinion of the Polmaise system of heating, as applied to plant structures; also some hints and plans for laying out the grounds of villa residences, adapted to this climate.

I am, sir, yours respectfully,

RICHARD DAVIES,

Gardener to R. P. Resor, Esq.

Clifton, near Cincinnati, Sept., 1850.

ROUGH NOTES ON GARDENS IN THE VICINITY OF CINCINNATI.

BY W. HEAYER, READING ROAD NURSERY.

MR. EDITOR—If you think the following notes, jotted down whilst on a recent visit to the places named, worthy a place in your Review, they are at your service.

SPRING GARDEN, the residence of A. H. Ernst, Esq., President of the Cincinnati Horticultural Society.—The house, situated on the side of a steep acclivity, commands a fine view of the city, and a considerable portion of the beautiful valley of Mill Creek. Here

are some handsome specimens of native evergreens, of various kinds. The hedges of American Arbor Vitæ, (*Thuja occidentalis*), planted as a screen to the spring house, have a pretty effect, and show how admirably they are adapted to the purpose, and how well they bear clipping; we noticed, also, two beautiful specimens of the red and yellow Siberian Crab, their branches bent to the ground with the weight of fruit: in our opinion, these

beautiful ornamental trees are not so generally appreciated as they merit; every good housewife is acquainted with the value of the fruit as a preserve, and when in bloom, in the spring, nothing in the garden or shrubbery makes a finer show. Divest them of their fruit and flowers, and they are handsome objects; and even in winter, when bare of all extrinsic appendages, they are neat, symmetrical trees. Mr. E. has a great many varieties of pears fruiting this year, amongst which we noticed the *Julienne*, a great favorite of his, and we think very deservedly so; a tree of the *Louise Bonne de Jersey* was literally covered with fruit. Mr. E. says this variety fully sustains here the high character given it in the eastern states, and that it is in every respect first rate. Mr. E., in common with every cultivator of experience, thinks that the number of varieties of fruit in cultivation is much too large; and he is making notes of the various kinds, as opportunities offer, with a view of applying the pruning knife to all inferior sorts: he will fruit a large number of varieties this fall, and intends to publish their deserts, for good or bad, in the *Western Horticultural Review*. We noticed, also, a small bed of *Lilium lancifolium*, in bloom: these bulbs were planted last fall, and stood the winter unprotected—Mr. E. being the first within our knowledge to prove their hardihood in this vicinity.

JACOB HOFFNER's, at Cumminsville.—This garden, under the management of Mr. Robert Ross, still maintains the high character for neatness and good order which has so long distinguished it: the closely mown lawns, the beautifully clean and smooth gravel walks, the neatly trimmed and well kept box edging around the flower beds, altogether form a coup d'œil that is seldom seen, and rarely surpassed. We would advise all our friends who wish to have a small taste of paradise, to visit these gardens. Here is, perhaps, the

finest collection of exotic plants in the western country—among which may be named the Sago Palm, (*Cycas revoluta*,) said to have once belonged to Robert Morris, one of the signers of the Declaration of Independence. This plant bloomed last year—a rare circumstance in this country. Here is also a fine specimen of *Bonapartea juncea*, also a beautiful variety of the *Hibiscus sinensis*, raised from seed brought from the island of Cuba, by Mrs. H.: it is a single flower, of a dark scarlet color, with a distinctly marked center of maroon, in the style of *Verbena bicolor*, and when in bloom is a very striking object; also a pretty specimen of the variegated *Yucca aloefolia*, a plant we have not seen in any other collection around here. In the hot house we noticed a fine specimen of *Cereus triangularis major*, in bud; also a plant of the *Begonia maculata*, in fine bloom. As its trusses of delicate white flowers are seldom seen in our collections, it can not fail to be an object of attraction. In the moist stove house were a small (but select) collection of *Orchids*, in vigorous growing condition, and a fine specimen of the Pitcher Plant, (*Nepenthes distillatoria*.) The amateur florists or botanists will here find many objects of interest, that will well repay them for their time spent in the visit.

MOUNT STORM, the residence of R. B. Bowler, Esq.—This place commands a fine prospect both up and down the delightful valley of Mill Creek: here are some beautiful specimens of evergreens, amongst which we noticed the *Araucaria imbricata*, which has stood out, unprotected, three winters; also the *Cedar deodara*, which has this season made a growth of over two feet. Here is also a fine specimen of that beautiful pine, (*Pinus Austriacus*,) also a Cedar of Lebanon, doing finely, and proving that it will stand our climate: we found the conservatory in the process of re-formation—the plants originally

planted there, some six or seven years ago, having become too large, had been taken up and set in tubs. We much regretted to see the splendid specimen of *Araucaria excelsa*, some fifteen feet high, without exception the most symmetrically beautiful tree we ever beheld, cramped into a box less than three feet square. Mr. B. was engaged in building considerable additions to his house, preparatory to remodeling his flower borders, and purposes to erect an extensive range of hot and green houses, which will, when finished, render this the most complete private establishment in the western country. We are now in the village, or I believe I should say the incorporated town of Clifton, a neighborhood destined some day to occupy a bright page in the annals of western horticulture. No where within the sphere of our knowledge is there a community where such a spirit of emulation and generous rivalry in horticultural pursuits exists among the same number of individuals, as in the incorporated town of Clifton; and as they nearly all subscribe to Downing's Horticulturist, to inform themselves on eastern improvements, so I hope they will all contribute with pen and purse to this western enterprise, to extend information on their favorite pursuits.

On emerging from the grounds of Mr. Bowler, we have facing us on the right the substantial and comfortable looking residence of J. A. D. BURNOWS, Esq.; but the place and improvements, being all new, do not at present produce much effect.

Across a ravine to our left is "*Scarlet Oaks*," the residence of our friend the EDITOR. On the crest of a bold knob stands the house, built in the Swiss cottage style—its high, steep roof, and sharp pointed gables harmonizing well with the surrounding scenery. The Doctor has here a very fine assortment of roses, his favorite flower; he has also a good collection of hardy shrubs

and plants, and quite a fine assortment of fruit trees, many of them bearing this year for the first time.

The next place on the road approaching the city is the residence of Bishop M'ILVAINE, a son-in-law of Mr. Coxe, the first writer on American Fruits. He has a choice collection of fruits, and his trees are remarkably healthy.

Facing us, as we still approach the city, is the residence of R. BUCHANAN, Esq., the first President of the Cincinnati Horticultural Society, and author of a recent Treatise on Grape Culture in Ohio. Mr. B.'s taste runs more in Fruits than Flowers, and we may expect our Fall Exhibition will show some of the results of his planting and experience.

Adjoining the last named place is the residence of F. BALL, Esq. This is truly a *multum in parvo*, and shows how much may be effected in a small space by a judicious arrangement of ground and selection of plants. The abundance of fruits, flowers, and vegetables, which Mr. B.'s place produces, might put to blush larger and more pretending grounds.

We next approach the residence of W. REXSON, Esq., a gentleman whose active exertions in the cause of horticulture the flourishing state of our Society stands ready to attest. Mr. R. is abandoning the practice, so common here a few years ago, of planting trees and shrubs in formal straight rows, and is adopting the more natural and picturesque system of clumps and groups. This place, under the careful management of his gardener, Mr. William Evans, we found in very neat order, doing credit alike to both gardener and employer: here is one of the best arranged green houses that has ever come under our observation—the only defect apparent to us is the stage being some twelve or fifteen inches too high, and the shelves too narrow to hold the pots of good-sized

specimen plants. Mr. R. has quite a number of the new and highly praised plants, among which we saw *Torrenia Asiatica* in flower, for the first time; we also noticed some new *Fuchsias*, Princess Alice, Magnificent, Beauty of Salisbury, etc.; they were all fine, and a decided improvement upon the old kinds. We were much pleased with the appearance of Mr. R.'s vinery, although only the first year of its bearing; there were bunches that would do credit to any establishment; the vines were making a remarkably strong and healthy growth, promising a noble crop for the following year, whilst the fruit was coloring in a manner to please the most fastidious connoisseur. The construction of this house was an experiment, the roof being on the curvilinear plan, with iron rafters, and Mr. R. says works admirably, in which statement the flourishing appearance of the plants and fruit fully bear him out.

Our next visit was to Mr. R. P. Rason,

brother to the last named gentleman. Here we found things in good order, the plants generally in fine healthy condition, and noticed a number of newly-imported specimens, among the rest some new *Fuchsias*, including Snowdrop, One in the Ring, etc., all looking well, and forming a very pretty addition to our green house stock.

I can not close this article without advertising to a paragraph which appeared some time ago in Downing's Horticulturist, over the signature of LENOCHAS, Gardener to Professor Silliman, in which he attempts to show that green houses may be made very attractive places in summer. I am sure if Mr. L. had been compelled to pass several hours a day in a green house in Southern Ohio, any time within the last three months, he would have found he had a warm situation, and would, I have no doubt, be earnestly petitioning the Governor for a commutation of punishment.

THE GRAPE VINE.

THE cultivation of the grape in the valley of the Mississippi, is no longer a doubtful experiment. The success for the last seven years, attending the efforts of those who have paid proper attention to the culture of the Catawba and Isabella grape, must render it certain, that the Ohio valley is to become a wine district, and that the most profitable product of our river hills, will be from the cultivation of the vine. Therefore I take it for granted, that your Review will be the medium for communicating to your subscribers and the public, information on this branch of horticulture, and any statistical tables or other intelligence, which may be connected with this important subject, will be of some interest to your readers. In this first communication I beg leave to submit a table

officially reported to government, showing the importation of wine from foreign countries, during the year ending 1849. I will also preface this with a brief sketch of the history of the vine now cultivated in Europe, as given by various writers on the culture of the grape.

The great variety of grapes now cultivated in Europe renders it difficult to ascertain the original varieties first introduced. It appears, however, that the vines of Europe are of Asiatic origin, and were first found in Persia. It is also certain that the cultivation of the vine was known to Noah, for it is said in Genesis, that after the deluge "Noah began to be a husbandman, and planted a vineyard." From Asia it passed into Greece, and thence into Sicily. The Phœnicians during the time of their commercial prosperity explored the

coasts of the Mediterranean, and carried the vine into France and the Islands of the Archipelago. From thence it found its way into Italy and Spain.

The Romans cultivated the vine at an early period of their history, and used wine in their libations at their sacrifices. Romulus, however, discouraged its use, which prevented the introduction of it as a beverage until his edict was abolished. The general culture was then encouraged, and increased to such excess, that it became necessary to restrict the use of wine by severe laws. At one time women were prohibited from using wine in any case whatever, under the penalty of death, and men until they had attained the age of thirty years. Cato mentions that the custom among relations of kissing women when they met, was to ascertain by their breath if they had been drinking wine.

Pliny gives an account of a renowned Roman who so improved his farm near the city of Rome, that in one year the product of his vines sold for four hundred thousand sesterces.

The vine was highly esteemed by the heathen nations, and the invention of wine was ascribed by the Egyptians to Osiris, by the Latins to Saturn, and the Greeks elevated Bacchus to the rank of a deity, for having brought the vine from Arabia Felix.

It is said by Pliny that Bacchus was the first who ever wore a crown, and as the God of vintage, his crown is formed of the vine and its twining branches bedecked with clusters of fruit. The manufacture of wine was known to the people in the early part of the Christian era, as we are informed that our Saviour at the wedding, changed the water into wine, thus setting the example to his followers of conferring benefits, instead of adopting the modern style of charging a fee for saying a prayer on such occasions.

At several periods of the history of the

world the cultivation of the vine was prohibited by severe laws, but since the twelfth century a new impulse has been given, which extended through all portions of Europe, and we now find the banks of the Rhine, the mountains of Hungary and Switzerland, and the plains of France and Italy cultivated with more than two hundred varieties of the grape. Those most highly esteemed in France for the manufacture of wine, are the Burgundy grapes, three varieties of which produce the champagne wine. The German and Swiss grapes are principally celebrated as wine grapes, and four or five varieties highly esteemed for their prolific bearing and regular crops.

The Madeira grapes are all celebrated for wine. The table grapes of France are principally the Chasselas, the Frontignac and other Muscat grapes. The Romans introduced the vine into the island of Great Britain, and at one time the culture of the grape promised to be profitable; but it is now ascertained that the climate is unfavorable for field culture.

The district of the old world most favorable for the rearing of the vine appears to be within the parallels of thirty and fifty degrees of north latitude.

In the United States, where the vine is native, it may be found in a wild state in almost any portion of the Union comprised within the parallels of twenty-five and forty-five degrees of north latitude; but it must be observed that the European grape will not bear the same latitude in this country, as there is a more genial temperature experienced in London and through the whole of western Europe, than in our corresponding latitudes. It is an interesting point to determine the cause of this. The solution probably is to be found in the warm water of the gulf stream in the North Atlantic, and the prevalence of west and southwest winds. This remarkable current not inferior to the

Mediterranean in its extent, sweeps through the ocean toward the continent of Europe, having a temperature from three to ten degrees higher than that of the contiguous sea. The winds that blow over it have its character impressed upon them, and rush up from the west and southwest, invading Europe with currents of warm air, which increases the temperature, and the vine taken from the latitude of fifty in Europe cannot be successfully cultivated in the latitude of forty in this country in the open field.

For these reasons we may not be able to cultivate the European grapes in the Ohio valley; but as we have the native Catawba and Isabella to take their place, we need not regret it, for the wines made from these grapes

will prove equal to any foreign wine made in any part of the world.

The United States produces about one hundred varieties of grapes. Those which will probably be cultivated for wine will be the Catawba, the Isabella, the Cape or Schuylkill Muscadell, the Ohio, Norton's Virginia seedling, Bland's Madeira and the Herbermont, all these, with one or two exceptions, are natives of South Carolina, but succeed well in a colder climate.

By reference to the annexed table which is based upon the lowest estimated value of foreign invoice, it will be seen that we pay nearly two millions of dollars annually for imported wines, many of which are inferior to those of domestic manufacture.

From the Merchants' Magazine of August, 1850.

Wine Imported into the United States from June 30th, 1848, to July 1st, 1849.

WINE IN CASKS.

	Gallons	Value
Burgundy, - - - - -	15,949	\$4,866
Madeira, - - - - -	193,971	105,302
Sherry and St. Lucar, - - - - -	170,794	128,510
Port, - - - - -	711,268	272,700
Claret, - - - - -	1,912,701	263,836
Teneriffe and other Canary, - - - - -	65,214	22,643
Fayal and other Azores, - - - - -	12,636	5,108
Sicily and other Mediterranean, - - - - -	130,851	32,231
Austria and other Germany, - - - - -	6,680	2,832
Red wines not enumerated, - - - - -	994,458	221,177
White wines not enumerated, - - - - -	971,895	210,139

WINE IN BOTTLES.

	Dozen	Value
Burgundy, - - - - -	1,608	8,184
Champagne, - - - - -	86,041	439,508
Madeira, - - - - -	97	759
Sherry, - - - - -	227	803
Port, - - - - -	299	1,281
Claret, - - - - -	56,694	68,836
All others, - - - - -	15,129	32,642

\$1,821,357

We might have an excuse for paying this onerous tax, if we lived in a climate unsuited to the vine; but it is now well ascertained that the sparkling Catawba or champagne

wine made in Hamilton county, will compete with the most favorite brands imported from France, and such is the demand for Ohio champagne that there is no longer a doubt of

this wine taking the place of foreign wines if made in sufficient quantity to supply the consumption.

How important then for the farmers of the Ohio valley to devote small portions yearly of

their uncultivated hills to the growth of the vine, thus realizing a profit of two or three hundred dollars to the acre for ground which is now useless for any other purpose.

* G *.

RANDOM NOTES ON HORTICULTURE.

DEAR SIR—A year since, I submitted to the readers of the Horticulturist, the proposition, that the diseases so prevalent in the West in the pear and cherry trees, and the vine, were caused by the fermentation of the sap after exposure to drought and the burning rays of the sun had caused a suspension of its circulation. Observation and the experience of another season have confirmed my views, at least to my own satisfaction. A few notes upon this subject may possibly be of interest to some of your readers.

The first orchards in the West were all planted under different auspices from those of the present day. The trees, whether apple, cherry or pear, were mostly seedlings, the art of grafting being little understood by the pioneers, and their time, fortunately for the trees, being required for other and to them more important pursuits. The trees were thus abandoned to nature, the scalping knife and tomahawk being in more frequent use than the pruning knife and the spade. When single trees were transplanted they were placed near the dwelling and received thorough protection. When in orchards they were a mutual protection to each other, being very much crowded together. Added to this, the country was less cultivated and open, the green sward grew freely about their roots, thus preventing the speedy evaporation of moisture and the huge forest trees threw their protecting shade over their branches.

When a boy I was familiar with, I think, far finer fruits than I see around me at this

time. Our cherry trees never burst their bark, our pear trees never blighted, nor did the mildew blast the grape. Every year I enjoyed the luscious St. Michael; the green gage never denied me its sweets, and the cherry trees trailed to the ground, their branches heavy with their tempting and juicy fruit. But none of these were planted in open exposures. They were surrounded by brick walls, or trees of size sufficient to protect them, root and branch, from the scorching sunbeams. Some of them are still living, and will still live and bear fruit, until, as will shortly be the case, they will be rooted out to give place to stately buildings. Fruit trees are, as I have said, planted at this time on a different principle. They are taken from the crowded nursery rows, where they have been pampered and fattened on a rich soil, and thrust carelessly into one different in every respect. The pruning knife mutilates their branches. They are placed in an open exposure. The ground is dug up a few feet around their roots—their pores immediately choked up with a coat of lime wash, and there they stand, to live or die, survive or perish, as best suits them. Almost all our gardens being thus little better than "Hospitals of Invalids." During the time when they should be growing there is not a drop of moisture at the roots. The sun has caked the surface soil, so that showers cannot penetrate, and they lie in a completely dormant state. The thin array of leaves afford no shelter and digests no sap, for nothing is sup-

plied them from the roots, and the wondering proprietor wrings his hands and makes wry faces as one by one they die with the blight, burst their bark, or go off with some other disease, and yet he has not bestowed, perhaps, as much thought or care on five hundred trees, trees too not indigenous to the soil, as a Dutch gardener will bestow upon a single cabbage. I do not mean that they require such cultivation. I saw lately in a newspaper an anecdote of a lady who advised her friend to give her children a little "wholesome neglect." I would give this advice to tree growers. But let them first give their trees a proper site and soil. A delicate tree fresh from a nursery bed should not in our climate be thrust out to be buffeted by every breeze and scorched by every sunbeam. Nor does it require constant doses of lime wash, more than a young child does repeated exhibitions of Godfrey's Cordial, or some other disgusting nostrum. All that they require is proper soil and position and nature will do the rest. Do not let the trees be exposed to the constant alternations of heat and cold. Let them have a constant, steady supply of moisture at their roots, till firmly established, and even after, if you desire healthy trees and sound fruit. There are times in this climate when rain does not fall for weeks. Now without moisture, trees can extract nothing from the soil. The earthy salts requisite, cannot be held in solution to be converted into sap. Assimilation cannot take place—a horse could as well digest his oats without saliva or some other liquid secretion. Yet we require or expect our trees to extract nourishment from hot baked clay. During such dry seasons what little moisture is derived from the dews and passing showers, can be of little service to a tree, even supposing the intense heat of the sun has allowed them to retain and digest it, and it does not pass off by transpiration.

In order to form both tree and fruit there must be a union of what is imbibed by both leaf and root. But the root is inactive, dormant, dead, to all intents and purposes. The alkaline basis imbibed from the soil being absent the tree can manifestly make no progress. Carbonic acid and water may be taken in by the leaves and perhaps circulate through the sap vessels, but not uniting with alkalies they are worse than useless. And now I come to what I deem the true cause of the blight. The sap vessels are filled with an immature fluid strongly impregnated with carbonic acid, which in its stagnant state, must necessarily ferment and undergo what Liebig calls *eremacausis* or slow decay. Its total corruption, saturated as it is with sugar, gluten and other substances found in the sap vessels preparatory to secretion in the branches or fruit, is the speedy result. Common water in a green wooden tub with such an exposure, would soon become putrid, and it is not surprising that such a combination as sap when its circulation is suspended, should, in a very short space of time, be reduced to a like situation. No tree ever blighted when there was a free circulation of sap. The disease most commonly occurs after a dry spell in June or August, but it may also occur in the fall after a warm wet season. The trees excited to a new growth are not able to mature their sap. It remains, however, in the vessels and stagnates, being principally a watery saccharine and undigested substance. In the spring it is carried through the entire tree and the consequence is the entire corruption of the whole. It is noticed that trees planted on the north side of a hill are not so susceptible to blight as when placed in a southern exposure. The explanation of this is simple. The soil is not so much nor so long exposed to the heating influence of the sun. It is manifest that the longer the soil is exposed to the direct influ-

ence of the sun, the greater will be its evaporation. On the north side of a hill the rain has not only much more time to penetrate to the roots of trees but the moisture is better retained, though after a long drought the evil is the same in both situations. Occasionally after a long dry season, very suddenly after a shower, the blight sometimes makes its appearance. In this case the benefit of the moisture from the small quantity of rain that falls, is not enjoyed by the roots. But the leaves are in full action. They draw carbonic acid from the atmosphere and the rain in combination with the water itself, but receive nothing from the roots. The heat of the sun acts upon this immature fluid almost instantly, for this species of blight on such occasions, always takes place first in the tender extremities of the shoots, though it may extend rapidly to other portions. Nothing but the knife can then be of any use and the delay of a day may cause the loss of the entire tree. The application of lime wash has been recommended by some. But if it has any beneficial effect it is from its antiseptic qualities, lime or any alkali, according to Liebig, putting a stop to fermentation. By being taken in through the pores of the bark it may prevent the spread of the blight, but its utility is, I think, doubtful, further than as a prevention to the attack of insects. When a tree is in full healthy action any adhesive application is in my opinion injurious, as it impedes transpiration. I repeat that it is impossible for any tree to blight or burst its bark so long as the sap has free circulation during the season of growth and maturation. Either the roots must be badly supplied with moisture, or the leaves unable to digest the supplies furnished them. The result in either case being stagnation of the sap, fermentation, and then decay. Frequently a tree will blight and die while others within a few feet of it escape. But exami-

nation will always show that those that survive are in a more retentive soil or are otherwise protected, either by shading, from having their branches low, or being naturally or artificially mulched. Of this I am fully convinced by my own personal experience, as well as observation in the gardens of others.

During the past season I have not lost a tree that I mulched and sheathed with straw. Two or three that I purposely neglected died with the blight. Until I resorted to sheathing and mulching I never could succeed in preserving a single cherry tree. This year I have not lost one. My soil is light and sandy and excessively dry. Without some protection of the kind to ensure a supply of moisture, my trees, fruit and ornamental trees as well, would never flourish. I lost regularly one half that I planted. The present season has been remarkably unfavorable to transplanted trees, yet I have not lost more than two in a hundred, and those received no attention whatever. The obvious remedy for the diseases referred to is to plant in a soil that is somewhat retentive of moisture, and when this cannot be done the branches should be suffered to grow low, and thus afford protection to the trunk. Until the trees have somewhat advanced, sheathing and mulching will be found effectual, particularly if, during a long drought the trees are watered occasionally, without however removing the coverings. Watering a tree unless it is mulched is injurious, particularly when it is exposed directly after to the hot sun. If our vine growers instead of constantly ploughing and hoeing around the roots of their vines, would keep down the weeds and keep up the moisture, either by mulching them or allowing them to grow in such a manner as to shade the roots, instead of training them to bare poles, we should hear less of the mildew than we now do. It is only after a cessation of their growth that the heavy rains do so much

injury, thus giving rise to the false impression that the disease is caused solely by the excess of rain.

I had intended to give the result of some experiments made by myself and others in reference to the foregoing topics and tending to corroborate what I have advanced, but as this article is already of a sufficient length, I must postpone them for the present. I have troubled you thus far under the belief that

the experience and observation of every one upon this important subject would be welcome to your columns. Even if the views I have advanced can not be sustained, we may recollect that the right road to truth is sometimes found by pursuing a wrong one, and I wish to invite others to investigate the subject, for to the West it is of paramount importance.

SYLVANUS.

September, 1850.

CURCULIO, ETC.

In the account of late proceedings of your Society, I see it stated that Mr. Buchanan exhibited plums in great perfection, where the *shaking process* had been pursued, whilst other trees in the vicinity, where there was no shaking, were all destroyed by the curculio. I take it for granted that convenience gave those round the house the shaking preference. The curculio is a timid insect—is less destructive where trees are close to the house, and persons constantly passing and repassing. It is on this principle that plums escape, where hogs or other animals are constantly passing by them. Again, even the curculio has a discriminating taste, and has his favorites. To the success of Mr. Buchanan should have been added the experience of some other members of the Society, then present, who had tried the shaking process, and failed. When the curculio can be induced to name the hour, or hours, in the day, when he will light on the trees, I shall have full faith in shaking. Till then, to those fond of shaking, I would recommend Mr. Thornberger's plan: having one tree of choice plums near his house, and two dogs, he tied them, turn about, from sunrise till dark, to the tree, and kept up a constant shaking. The result was a full crop. In twenty-five years, I have never lost a crop from the curculio, and had

but very few stung—some varieties not one. The pavement and gravel walk extend further than the tops of the trees, and are near the house. I have trees scattered through the garden, and three years during that time have had a full crop—the other years, not a single fruit escaped the curculio.

What think you of the opinions of the members of the American Institute, in relation to the strawberry? It seems they have only three kinds that they venture to recommend for cultivation: the Hovey, Boston Pine, and Early Scarlet. The Hovey deservedly stands high, as having no equal for size and bearing, in general use. It is not of the highest flavor, and with us, in some soils, is apt to die out in summer. This is less cultivated with us than the Hudson, which is denounced East. In truth, they have it not. By some the early Virginia is called the Hudson, though the former is *Hermaphrodite* and the latter *Pistillate*. Mr. Downing's Hudson, he describes as a necked fruit. Ours is directly the reverse and his probably a seedling from it. Mr. Bandreth of Philadelphia, writes me that the old Hudson is now rarely seen there, seedlings from it having rooted it out. Their other two are

the Boston Pine and Early Scarlet, both hermaphrodites, and not even cultivated here as impregnators, as we have plants of that class, that are much better bearers and bear fruit of double the size. If the new hermaphrodite seedling of Mr. Schneicke, in the Garden of Eden, should equal the promises of the three years since it was first raised, it will be worth all the Keen's seedling and other hermaphrodites, which it appears are exclusively cultivated in England. It has thus far, produced a full crop of extra large and well flavored fruit. It may not always bear a full crop, as hermaphrodites produce more perfect blossoms some seasons, than they do others. On this, and some extra large and fine Pistillates of Schneicke's and McAvoy's, the fruit committee properly decided to give no decided opinion and grant no premiums, until they had tested their bearing, character and qualities another year. It would be strange if not of fine quality, as five or six kinds only, were selected by them as worthy of cultivation, from several thousand of seedling plants. Our fruit committee examine the strawberry beds when in fruit. At the East, the report is made from the fruit exhibited to the society. The consequence is, a large fruited hermaphrodite may get the highest premium, when the vines did not bear one-tenth of a crop of perfect berries. The Black Prince strawberry cultivated East, is pistillate. We have it both hermaphrodite and pistillate. The former is the best flavored. The fruit of both is handsome, but neither of them is here deemed of fine flavor. The congress of fruit growers were about equally divided. A part thought it superior to all others in flavor, and the residue, worthless. Our taste varies greatly from Eastern cultivators, in regard to the best flavor for the strawberry. We prefer fruit more or less acid, and that requires a liberal sprinkling of sugar. This is the case with the Hudson, and it is by us

more cultivated than all others. At the East it is cast off because it is sour.

Compelled, as I am, to believe in Rochester knockings, since they have been vouched for by two Eastern divines, (though decided to be clearly the work of his satanic majesty,) I am also bound to believe the truth of the two recent instances, in which a grape vine bore apples, and a limb of a peach tree in Kentucky, bore both peaches and nectarines, as I understand you are informed by a correspondent of yours. I suppose I must believe this also, and not believe that a bud of the nectarine had been inserted in the limb of the peach. These follies are hard to swallow, but we may as well make a merit of necessity. I shall be compelled to change my views about a change in a grape vine in one of my vineyards. For several years it bore the white chasselas. A succeeding season, the tenant, with his eyes starting out of his head, discovered on the same plant, the black Schuylkill muscadell. I was then foolish enough to believe it was a chance sprout from the old root, as it had been grafted with the white chasselas. This Kentucky miracle beats one East, where a tree bore peaches one season and nectarines the next. The evidence was, that two or three peaches were, in the fall, found lying under the tree, and the next season it had a full crop of nectarines. I have the more faith in these miracles, as I passed through New Jersey some sixty years since, when the Morristown Ghost was all that was spoken of, and some deacons in the church belonged to the company that was hiring the ghost, by a liberal contribution of money, to disclose the spot where the great buccaneer had deposited his ill-gotten wealth.

Yours,

N. LONGWORTH.

THE CURCULIO, OR PLUM WEEVIL.

THIS troublesome insect has for several years past been so destructive to the plums, apricots and nectarines in the West, that many persons have abandoned the cultivation of these delightful fruits in despair; several methods have been recommended by writers to prevent the ravages of the curculio, but few, however, have proved successful, and some worse than useless.

In my own experience I have found the "shaking process" the best, and here present it to your readers, with a hope that some of them may succeed with it as well as I have.

From the middle of April to the 1st of May, or as soon as the curculio appears to sting the plums, I spread a couple of sheets under the tree about sunrise, and with a sudden blow or jar to the trunk or branches, the insects fall on the sheets, and I then destroy them. This is again done in the evening, and continued morning and evening except in wet weather, until the middle of July or 1st of August, when the insect disappears. Some may think that this is saving the plums at too much trouble, but it occupies much less time than would be supposed, and is a pretty certain remedy. I have tried it both in the city and in the country for nine years past, and have never yet failed to save from half to a full crop. In the city I had ten plum, two nectarines and four apricot trees, some in pavement, others in sod and cultivated ground. The shaking process saved nearly all; those in the pavement were stung the least; three of the plum trees, one apricot and one nectarine still remain; the march of improvement has overrun the others; two of the plums and the nectarine being in pavement and getting an occasional *shake*, bear well; the other plum, in grass and neglected, falls

a prey to the curculio, and the apricot to the boys, being near the street. In the country I have twenty-eight plum, three apricot and three nectarine trees near the house, most of them in sod, a few in pavement and part in cultivated ground. They first began to bear in 1846; I used no effort to save them, thinking that the entire destruction of fruit in 1845 by late frosts, had also destroyed the curculio, but in this I was mistaken and lost the fruit. In 1847 late frosts destroyed the fruit in the blossom; but the next year, 1848, was very favorable for fruits, and I saved fully two-thirds of a crop from the trees near the house, by shaking and destroying the insect. I commenced the middle of April and continued until the middle of June, the curculio destroying some of the fruit afterward. From twenty-six plum trees in the apple orchard about one hundred feet east of those near the house, I did not get a single plum, having used no means to protect them; they were in meadow grass which I did not wish to injure by tramping; the grass under those that I shook was frequently mowed, and the ducks and chickens running amongst them doubtless destroyed many of the curculio.

Some of my neighbors have tried planting in a hog yard, but without success. Mr. Longworth and other gentlemen in the city, have succeeded admirably by planting in *paved yards* near their houses; but in the country this plan does not appear to answer as well; with me it failed in 1846, and since then I have shook off and destroyed as many insects from the trees in pavement, as in grass.

In 1849 late frosts destroyed nearly all in the blossom; I made no attempt to save the few plums that set, and they were soon destroyed by the insect. This spring was a

late one, and gave promise of a fine fruit year, which with us here has been fully realized. The shaking process was commenced early in May and continued till late in July, and I preserved a very large crop, losing the top of one tree and some branches of others, by leaving too much fruit on; I expected the curculio would thin it out enough, but they disappointed me for once; some of the plums were destroyed by rot, but still I had a fine crop. Three late varieties are not yet ripe. The twenty-six trees in the apple orchard did not mature a single plum, although the fruit set well on all of them.

I am by no means certain that this method will be a remedy every year and in all places; I merely give you the result of my own efforts. The curculio appears to be more abundant some years than others, and in good fruit seasons having more to feed upon, it is certainly less destructive to the plum than in bad ones; this year has been very favorable for plums, and some have saved them from the curculio with but little trouble.

A gentleman in Clermont county, in this State, has several trees that matured fine

crops this season, by partial shaking; other trees near them lost all by the curculio, having had no attention.

My friend George P. Buell of Indiana, has fifteen plum trees; one year he tried the hogs and another year salt, to destroy the curculio, but without effect. In 1848 and this year, he tried at my recommendation the "shaking system," and succeeded in maturing abundant crops of plums; he has great faith in it.

A near neighbor of mine preserved his plums on twenty-five trees, by shaking off and destroying the insect, until near the close of the season, when, being called from his home on business, they were neglected, and he lost them all.

I was first induced to try this plan at the suggestion of Dr. Mosher, and the president of the Horticultural society, Mr. Ernst, recommended it to public attention in an article in the Cincinnati Gazette last spring. I should be glad to hear how others have succeeded who have given it a trial.

R. BUCHANAN.

Cincinnati, September, 1850.

From the Working Farmer.

CLEANSING THE BARK OF FRUIT TREES.

We have often recommended the use of whale oil soap, potash, etc., for the cleansing the bark of fruit trees, and supposed that no application could exceed it for this purpose. A few weeks since we visited the seat of Robert Rennie, Esq., near the Lodi Print Works, and there saw the cleanest fruit trees it has ever been our lot to meet with. Mr. Rennie informed us that he used a solution made of one pound of bleachers' soda dissolved in one gallon of water, and applied it to the surface of his trees. All the fungi, dead bark, etc., are softened, and readily exfoliate from the healthy part of the bark during the growth of the tree; the surfaces of the

cherry, peach, plum, nectarine, apricot, and many other kinds of trees seemed polished, and of a color more closely resembling the new growth at the ends of branches than usual; the trees were in excellent health, and we were informed that they bore superior crops to those not so treated. Within the last few days we have applied the soda wash to our trees, and, for the purpose of ascertaining if so strong a solution would injure the tender parts of plants, have sprinkled it over the leaves of many tender shrubs; but as yet they are uninjured, while the inert parts of vegetables are readily decomposed by it.



JEFFERSON PLUM.

HAVING fruited this beautiful plum the present season, it affords the editor pleasure to find the following account of its qualities in Coles' New England Farmer, from which work other articles of interest have been selected.—Ed.

—
This plum has been brought into public notice within a short period. A few years ago it was recommended by some writers as the very best of plums, and this high com-

mendation has led to its extensive dissemination. Although this is an excellent plum, all things considered, and it should be ranked with the first, yet it is not *the* best in every respect. The Green Gage excels it in quality; the Peach, Manning's Long Blue, Lombard, Prince's Imperial Gage, and many others excel it as growers, and several kinds are larger. Yet the Jefferson is a tolerably good grower, the fruit is large, and in quality it ranks as first rate, for we have several varieties of plums classed as best, though not

hardly equal to that standard of high excellence, the Green Gage. Here we would remark, that as tastes differ, some persons prefer plums of a spirited, vinous flavor, to the sweet and luscious.

The fruit is large, roundish-oval, slightly narrowed at the base, slight suture; greenish-yellow, and when fully ripened in the sun, a golden-yellow, and a blush of purplish-red, thin white bloom; stalk about an inch long, rather stout, in a slight cavity; flesh a rich orange, rather fine, juicy, of a high, rich flavor; nearly freestone. Ripens from the last of August to September 15 or 20. A good bearer, and a tolerably vigorous grower,

but it grows unpleasantly in the nursery, as it is disposed to branch low. The fruit will hang long on the tree, and is not very liable to rot. Originated by the late Judge Buel, of Albany, N. Y.

We had some fine specimens of this plum from our generous friend, Andrew Lackey, Jr., Marblehead, from which our engraving is made. Mr. L. obtained the Jefferson by mistake, for some other plum, several years ago, and when considerable stir was made in regard to the great excellence of this plum, and many were anxious to see the fruit raised in New England, he was so fortunate as to have a good-sized tree in full bearing.

CINCINNATI HORTICULTURAL SOCIETY.

Report of Flower Committee, June 1850.

THE Flower Committee who served as Judges at the recent Spring Exhibition of the Cincinnati Horticultural Society, beg leave respectfully to Report—

That they consider the recent display highly creditable to the society, to whose laudable efforts, community is so much indebted. From year to year we find new flowers, shrubs and fruits introduced by our enterprising gardeners and liberal amateurs, constantly swelling the lists of those things which contribute so largely to the enjoyments and happiness of a community, in whose midst and by whose aid, such a society as ours, may be so truly useful to the whole of our citizens; for it is not merely the cultivator, making his support, nor the amateur, reaping his enjoyment, who are benefited, but the genial influences extend to all, even to the little girl who may now purchase any day in the market a more beautiful verbena for a dime, than we have seen sold within ten years for a half-eagle—of course the effect pervades society—in the houses of the most wealthy and in the cottages of the most humble, we are happy to observe a growing taste for the beautiful, as evinced by the elegant parterres and modest window gardens. Those who are so unfortunately constituted that they cannot appreciate *Flora's* influences, may, most of them, be brought into subjection by the goodly and luscious gifts of *Po-*

mona, and no one who has observed our markets for a series of years can be insensible to the great improvement in the character and quantity of the fruits offered, and our vegetables are universally admitted to be superior to those exhibited in most cities. The members of our society, we trust, will not be considered arrogating too much credit to themselves, if they claim a large share of the merit due for these changes. Ten years ago, it was almost impossible to buy in our markets, even a common rose geranium—now, hundreds of pots are exposed for sale every day, of every variety of plants, some of very rare and most beautiful kinds, are constantly to be seen among them.

The drought which prevailed before the late spring exhibition, has had a very seriously injurious effect upon all out-door vegetation, and the period was also postponed on account of the extreme backwardness of the season, so that the green house plants were not in the best condition to show; indeed, we feel constrained to observe that many contributors, might earn much credit for themselves, and give much greater éclat to the society, if they would pay more attention to the manner in which they grow their plants for our exhibitions, and in this connection, we respectfully suggest for the consideration and action of the society, the propriety of holding the spring fair much earlier in the season, say in the beginning of May. The reasons for this are obvious. Green house

plants are at this show the chief attraction—many of them are in fine condition in April and May, and the season of bloom of others may be accelerated or retarded, if sufficient notice be given to the cultivator to prepare them. Cut flowers, hardy roses, etc., etc., do not really contribute very much to a display, and most plants may be shown to much better advantage in pot culture than as cut specimens. If it be objected that we should thus throw out of competition the hardy roses and the strawberries, it will be very easy to obviate this objection by having a second spring show for these things, about the 1st of June, and the vegetables may be all exhibited at the first or second period.

But, to come back to the time present, your committee feel bound to express their commendation of some specimens in detail, besides the appended list of premiums they have awarded and which they ask you to pay.

The calceolarias of Wm. Heaver, were particularly worthy of admiration, especially the herbaceous varieties; so were also those grown by R. Davies, gardener to R. P. Resor. The pelargoniums of Wm. Heaver evinced much care in their stocky, close and shrubby growth, and rich display of flowers. His fuchsias were also very creditable, and we were very much pleased with the whole aspect of his prize seedling "Western Bride." The cinerarias from this contributor, were superior varieties, chiefly his own seedlings, and have gained no little reputation, but their season had passed and they were less beautiful specimens than we have seen at his houses in April and May.

We regret to find at all of our exhibitions so few pot roses; the chief exhibitor this year was our enterprising friend John Sayers, who competed successfully for the tea varieties, and deserves commendation for his admirable manner of growing the Souvenir de la Malmaison, his splendid specimen plant, was very ornamental and justly attracted universal admiration. This contributor also had some very fine varieties of pelargoniums, but the plants were not so fine as those already noted. Among his plants, we observed that great acquisition to our collections, the heliotropium voltaireanum, fine healthy young plants with beautiful trusses of dark and exquisitely fragrant flowers; this is a plant we can freely recommend to all. Verbenas

alone would make Sayers a reputation; besides all the newest and best that he has been able to procure from abroad, he has originated many beautiful varieties, some of which we consider superior to several of the imported sorts, and his "*Kossuth*" we place in the very first rank. We hope he will another time present them well grown in pots.

The collection of green house and other plants from S. S. Jackson embraced some fine specimens, but even this excellent horticulturist and successful competitor may profit by the suggestions made above as to the growing of his show plants.

We always find upon his stands something rare and fine; two large plants of *lantana rubra*, attracted considerable attention, but we think the new *lantana* shown by W. Heaver among his selection of green house plants quite a desideratum, on account of its free growth and large showy trusses; its origin we do not know, but it very much resembles a flower we once saw at N. Longworth's green house, the only plant among three or four hundred of various species procured by his liberality from Mexico, that promised to be worth retaining in a collection. This variety is called by the exhibitor, "*L. meubilis major*." Mr. Jackson exhibited some seedling pelargoniums, which are very much better than some of the old sorts, but in the advances of modern times, your committee deem it necessary, that a new variety should be superior in every sense to its predecessors to entitle it to a prize.

We were pleased to find on his table a collection of native phloxes in great variety of flower, all probably varieties of the *P. divaricata* or closely allied species; they were procured from Iowa, and are well deserving of attention among our hardy herbaceous perennials; among them, "*Jenny Lind*" stands pre-eminent for beauty and delicacy of coloring.

Mr. Jackson's collections of cut roses were magnificent, embracing some of the finest specimens of Remontantes, Bourbons, Hybrid China, Moss, and other sorts we have ever beheld; as usual, he is far beyond all competitors in this interesting group. The plants of *Clematis Seyboldii* and *alba-pleno*, were very showy, and deserve the more attention from amateurs, now that they have been proved to be hardy. His fine healthy vine of

Techoma jasminoides was much admired for its large white flowers with purple throats.

We have already alluded to the *calceolarias* tastefully arranged in a basket by R. Davies, who deserves commendation for the neatness of the display of these and another basket of miscellaneous plants and a large basket bouquet. Among the former we observed a different family, as it were, from those of any other cultivator; the form of the flowers is good and the colors very distinct; the "Clifton Surprise" is one of the prettiest *calceolarias* ever exhibited in our society.

Too much praise can not well be awarded to William Evans, gardener to William Resor of Clifton, for his pretty collection of plants which occupied the temple in the center of the hall. The beautiful green house of which he has charge has been a perfect show of flowers since November last, and has been a source of great pleasure to the proprietor and his numerous friends and visitors.

Among the brilliants of this collection, the dazzling scarlet of Tom Thumb geranium and *Defiance verbenas*, both well grown, attracted all eyes. The arrangement of the table with a border row of *alyssum* and *lobelia gracilis* and a rising pyramid of other plants, was very tasteful.

We cannot close this report without hazard- ing a few remarks upon the bouquets, which we would respectively suggest are sometimes too formal and stiff; we should much prefer to see more of nature and less of art in these favorite little collections of Flora's offerings. The large bouquets, too, may do very well as decorations and will help to fill up vacancies in an exhibition, but we do not esteem them worthy of special prizes in future.

The judges will in this place remark, that in the list of prizes hereunto appended, they have deviated somewhat from the printed schedule, on the one hand, reducing the sums that were offered, when the articles did not appear to merit such amounts, and on the other, awarding many gratuities for contributions deserving of reward, and in this, they not only gratified their own sense of justice, but obeyed the instructions of the council.

It is earnestly hoped, that if such a thing be possible, all the competitors will be satisfied, at least with our anxious desire to do them justice; and further, we sincerely hope, that those who did not favor us with their

assistance, will be equally well satisfied with the awards which have not fallen to their portion.

PRIZES AWARDED

On the 5th, 6th and 7th days of June, 1850, by the Cincinnati Horticultural Society. Messrs. KELLY, COX and WARDER, Judges.

For the best collection of twenty hot house and green house plants of not less than 15 varieties, to S. S. Jackson, 1st prize,	\$10,00
For second best collection, etc., to Wm. Heaver, 2d prize,	7,00
For third best collection, etc., to H. Brachman, 3d prize,	3,00
Basket of plants, miscellaneous, to R. Davies, gardener of R. P. Resor, a gratuity of	8,00
For a miscellaneous collection, to Wm. Evans, gardener to Wm. Resor, a gratuity of	7,00
For three large plants, to Wm. Quant, gardener to N. Longworth, a gratuity of	1,00

Pelargoniums.

For the best six, in 6 inch pots, to Wm. Heaver, 1st prize,	3,00
For the second best, etc., to John Sayers, 2d prize,	2,00
For the best six in pots of any size to Wm. Heaver, 1st prize,	4,00
For the second best, etc., to John Sayers, 2d prize,	2,00

Fuchsias.

For the best six, in 8 inch pots, to Wm. Heaver, 1st prize,	4,00
For the best large plants to Wm. Heaver, a gratuity of	3,00
For the best seedling, "Western Bride," to Wm. Heaver, a gratuity of	2,00
For the second best seedling, "No. 3," to the same cultivator, a gratuity of	1,00

Calceolarias, Shrubby.

For the best three, to Wm. Heaver, 1st prize,	3,00
For the second best three, to Wm. Heaver, 2d prize,	2,00

<i>Calceolarias, Herbaceous.</i>		<i>Phloxes—New Prairie Sorts.</i>	
For the best ten to Wm. Heaver, 1st prize,	5,00	For sixteen pots to S. S. Jackson, a gratuity of	\$3,00
For a basket of pots to Richard Davies, gardener of R. P. Resor, a gratuity of	\$3,00	<i>Bouquets.</i>	
<i>Cinerarias.</i>		For the best display to the Misses Resor,	5,00
For the best six to Wm. Heaver, 1st prize,	2,00	For the best pr. circular, 15 to 18 inches high, to S. S. Jackson,	4,00
For the second best to H. Brachman, 2d prize,	1,00	For the best pr. circular, 9 inches high, to John Sayers,	4,00
<i>Hardy Roses—Cut Flowers.</i>		For the second best pr. circular, 9 inches high, to Miss Julia Resor, a gratuity of	3,00
Perpetual; For the best fifteen varieties, La Reine, Prince Albert, Emma Dampière, Yolande d'Arragon, Marquis Bocella, etc., to S. S. Jackson, 1st prize,	5,00	For the best pr. circular, 5 inches high, to Wm. Heaver,	3,00
Perpetual; For the second best, etc., to John A. Warder, 2d prize,	3,00	For a large circular, to Wm. Evans,	3,00
Annual; For the best twelve varieties, St. Brennus, George IV., La Tourterelle, Berlèze, Bon Ginneure, etc., to S. S. Jackson, 1st prize,	3,00	" " " Wm. Quant,	1,00
Annual; For the second best, etc., to John A. Warder, 2d prize,	2,00	For a pr. circular, to S. S. Jackson,	2,00
Display; For the best to S. S. Jackson,	3,00	" " " Wm. Heaver,	2,00
For miscellaneous collection of very fine specimens to John Sayers, a gratuity of	2,00	For a display, very pretty, to John and Isaac Jackson,	3,00
In pots; For the best six teas to John Sayers,	3,00	For a display, very small and neat, to Lewis Jackson, the juvenile gardener,	1,00
For a large plant of Souvenir de la Malaison in full bloom, to John Sayers, a gratuity of	2,00	Wreath, to Lewis Jackson,	1,00
<i>Dianthus Barbaters.</i>		Basket containing a pyramidal bouquet, to R. Davies, gardener, etc.,	3,00
For the best display to Wm. Cox,	1,00	Bouquets and cut roses, display, to S. M. Carter,	2,00
<i>Pansies—Cut Flowers.</i>		Bouquets and cut roses, display, to Mrs. McWilliams,	1,00
For the best display to W. Cox, a gratuity of	2,00	<i>Cut Flowers.</i>	
For the best twelve blooms to Wm. Cox,	3,00	Display, to Mrs. R. M. Moore,	4,00
In pots; For the best twelve to Wm. Heaver,	2,00	" Mrs. A. H. Ernst,	3,00
<i>Verbenas.</i>		" Mrs. Wm. Heaver,	3,00
In pots; For the best display to H. Brachman,	3,00	" Misses Orange	2,00
Cut; For a display, chiefly seedlings and new sorts, all fine, to John Sayers,	2,00	All which is respectfully submitted by	
		M. KELLY,	
		WM. COX,	
		J. A. WARDER. } Judges.	
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		Report of Fruit Committee, June, 1850.	
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		REPORT of the Fruit Committee for the Spring Exhibition of the Cincinnati Horticultural Society, held June 5th, 6th and 7th, 1850.	
		The backwardness of the season, and the extreme drought, had injured the crops so much that the accustomed supplies were not furnished; consequently, the committee have	

had very little to report upon—and they will, therefore, include some fruit exhibited on the Saturday preceding the fair, and give an abstract of their notes taken in Mr. Longworth's Garden, respecting the growth, flavor, appearance, and bearing qualities of his Strawberries, which are truly a fine collection—embracing most of the celebrated sorts already known, and also numerous seedlings of this neighborhood. Some of which are possessed of extraordinary qualities.

On Saturday, June 2d, we found on the table a Cherry called "Early Meade,"—the tree had been procured from J. Burr, of Columbus, four years ago. The name is not familiar to the Committee, and being not quite ripe, dark red, and somewhat irregular in its outline, one of the Committee supposed it to be a black tartarian. This, however, is questionable, as a tree of that variety close by, but in a warmer soil and situation, had not yet begun to color its fruit. The Early Meade is a Cherry of good flavor and appearance, and desirable for its comparatively early period of ripening—the Maydukes not being so forward.

At the same time were exhibited some good specimens of Hovey's seedling Strawberries, Iowa Male, McAvoy's No. 1 and No. 12, Schneicke's Round Male, Burr's New Pine, etc.

At the Exhibition the chief contributors were Messrs. Longworth, Carter, Kidd, Wade, Ives and McAvoy; but we shall not describe all of the sorts in this part of the report, preferring to add an abstract of our labors among the plants. Mr. Carter's seedlings, however, should be mentioned more in detail. He presented, beside named varieties, four of his own seedlings, designated by numbers.

No. 1. *Staminate*—large, round and short, slightly conical; scarlet; seeds light colored and moderately deep-set; flavor good, flesh white; prolific.

No. 2. *Pistillate*—very prolific; large, often angular, long; scarlet; seeds darker than No. 1, and deeper set; flesh red; sour.

No. 4. *Pistillate and Staminate*—medium size; average figure; pale scarlet; seeds dark and superficial; flavor, a very pleasant sub-acid and agreeable; flesh, pale amber.

His specimens of British Queen should also be mentioned, since it is so seldom seen here; and we believe it has been undeservedly over-

looked in the multitude of new sorts; indeed, we so seldom receive a productive or pistillate Strawberry from abroad, that an occasional exception should be the more observed. The British Queen is pistillate, prolific; continuing to throw up trusses of flowers while the first are ripening; the fruit is large, conical, and sometimes angular, it is quite dark and shining; seeds dark, and moderately deep set; flesh red; flavor quite good.

In the deliberations upon Strawberries, the Committee wishing to have some standard of comparison, selected Hovey's Seedling as of *medium* flavor, from which their palate scale runs up and down, from *good* to superior or excellent, on the one hand, and to inferior, on the other. This remark will apply to all their notes of this year.

FIELD NOTES.

McAvoy's No. 1—pistillate, very prolific; Strawberries very large, round, or slightly conical; bright scarlet, or rather pale; seeds brown, moderately deep set; flavor, good acid; flesh reddish; *good*.

McAvoy's No. 7—pistillate; prolific; not ripe enough to decide as to its merits.

McAvoy's No. 12—pistillate; prolific; very large, but often irregular in figure, sometimes necked; quite dark when fully ripe; seeds dark; the flavor is rich and good; and the flesh quite red; *superior*.

McAvoy's No. 40—staminate; very prolific this year; beautiful, uniform, large round berries, of a bright scarlet; seeds brown, moderately deep set; flesh white; acid.

McAvoy's Extra Large Red—pistillate; short truss; prolific; large; average shape; scarlet; seeds brown; flavor not superior.

Schneicke's Pistillate—prolific; large and round; scarlet; seeds brown, not deep set; flesh white; flavor good.

Schneicke's Round Male—(for which the name of "Hermaphrodite" is now proposed, from its remarkable bearing properties evinced in three successive years;) staminate; high truss; very prolific; almost every flower set; very large, round and even; dark scarlet; seeds dark, deep set; flesh yellow; flavor *good*. This is the most remarkable kind we have seen, and the committee deem it highly worthy of cultivation.

Neck Pine is only mentioned in this place because it is so deservedly a favorite, and to

say that we are still ignorant of its origin. We may also observe, that it has the fault, besides its uncomeliness, of being too prolific.

Bee Hive—staminate, not very prolific, of medium size and quality.

Eberlein—staminate, (some flowers pistillate,) rather prolific, but some plants not at all so; medium size and quality.

Crimson Cone—pistillate, moderately prolific, above medium size, pointed, long, dark scarlet, seeds very deeply set; medium quality.

Large Early Scarlet—staminate; very prolific, (sixty-five on one plant;) medium size; pale scarlet; flavor good.

Virginia Scarlet—staminate; prolific; size below medium, round; scarlet; seeds pale, moderately deep set; flavor inferior.

Huntsman's—staminate; medium size, round; seeds superficial; dark scarlet; (looks like Hovey's;) flavor medium to good.

Huntsman's—pistillate; prolific; late; scarlet; some large; seeds light and superficial; flavor poor.

Black Prince—staminate; large; very dark; pointed and oval; surface shining; seeds superficial, dark; flavor medium, and afterward considered inferior.

Black Prince—pistillate; (supposed to be the true sort, though both were received in the same parcel;) large; conical, broad at base; very dark; seeds dark and deeply set; flavor decidedly inferior.

In the report of the Pomological Congress for last year, we find a great diversity of opinion as to the merits of this fruit, many of the delegates agreeing with us in condemning it on account of its entire want of flavor. The pistillate variety is undoubtedly the genuine sort.

Burr's Ohio Mammoth—staminate; prolific; very large; angular, pointed; pale scarlet; seeds brown; rather superficial; flavor not superior, though above the standard.

Burr's Rival Hudson—pistillate; not very prolific.

Burr's Late Prolific—pistillate; good size, pointed; dark; not very late; flavor excellent.

Burr's Carolina Pine—pistillate; medium size, pointed; dark; much like Hudson.

Burr's Scioto—pistillate; sometimes large, conical; flavor only good.

Burr's New Pine—pistillate; rather prolific; above medium size, conical, but not pointed; bright scarlet, or rather paler, sometimes shining; seeds superficial; flesh white; flavor superior, and considered one of the most delicious berries.

Burr's Seedling, or *Old Seedling*, is mentioned to complete the list: it is mostly rejected, except where it has overrun beds of other kinds; like most of the staminate, it is uncertain as a bearer.

Taylor's Seedling—pistillate; prolific; good size, long conical, beautiful shape; scarlet; seeds not deeply set; late; flavor inferior.

Emperor—(English;) staminate; bad bearer; large pointed; pale scarlet; and resembles Burr's Ohio Mammoth, except in the leaf.

Iowa Male—splendid plants without a berry; but generally a medium bearer; this is still a favorite with some; it is early; a short, round berry, of good size, pale color, and delicious flavor.

Hudson—pistillate; too well known here, by its dark, broad-based, even-sized and well flavored berries, to need a description; very prolific.

It would appear, from the report of the proceedings of the second Congress of Fruit Growers, (1849,) that the Eastern cultivators have lost the genuine Hudson strawberry—some considering it the same as the Early Virginia, and others disagreeing with them; and no Eastern writer has described it accurately. We have the genuine variety, identical with that brought from Philadelphia many years ago, by Mr. Arbogust, who was long celebrated for his success in the cultivation of this fruit, the secret of which success has been made public property by the zealous efforts of N. Longworth. Many sub-varieties have sprung up as seedlings, and some of these appear to have taken the place of the original; this we know to be the case in certain gardens here.

Mottier's Seedling—pistillate; very similar to the above, and no doubt originated from it; the berries are rarely pointed as the Hudson, but rounder.

Willey's—pistillate; very similar to the above, but the berries are rounder, and the foliage peculiar, (delicate in growth, and dark bluish green;) flavor excellent.

Jenny's—pistillate; this is also considered one of the Hudson family, (as are also several of Burr's seedlings); the fruit is plentiful; above medium size, broad at base, and pointed; at first of a bright scarlet, then changing, when fully ripe, to a dark color, and assuming a fine, rich flavor, and less acid than before.

Brewer's Mammoth—pistillate; prolific; large, pointed; scarlet; flavor good.

Brinckle's numerous seedlings, cultivated by Mr. Longworth, are generally poor growers: to this remark there are a few exceptions.

Cushing—staminate; not a very good grower; not very prolific; size medium; flesh amber; flavor fine.

Caleb Cope—pistillate; rather prolific; large, pointed; scarlet; seeds brown, deep set; flesh white; flavor medium.

William Henry Harrison—staminate; a good bearer; large, corcombed, pointed; dark red; seeds rather deeply set; flesh red; flavor medium.

Lizzie Randolph—pistillate; moderately good grower and bearer; size good; scarlet; seeds brown.

President—staminate; growing and bearing moderately; large, generally corcombed; very dark, somewhat shining; seeds dark; flesh reddish; flavor good.

Hovey's Seedling does not succeed so well in this garden as in some stiffer soils: in appearance, the plants do not compare favorably with other kinds, though all have had equal advantages, of highly-manured soil, irrigation and thorough tillage, under the watchful eye of the proprietor and his gardener, Wm. Quant.

We might have included several other sorts in this abstract from our notes, but shall not now trouble the Society further, except to mention briefly that delicious berry, imported from England many years ago by N. Longworth, of which the name was lost, but well known here as the Pistillate Keen, which, for productiveness, fine flavor, size, appearance, and lateness, deserves a place in every collection.

The premiums awarded at this exhibition are those offered in the schedule for strawberries.

For the best two kinds, a quart of each, the Schneicke's round male and extra large red, McAvoy's, to Wm. Quant, first prize, \$3.

For the second best two kinds, a quart of each, the McAvoy's No. 1, and Schneicke's pistillate, to Wm. Quant, the second prize, \$2.

The awards for cherries were not made, as the backwardness of the season has not enabled the cultivators to have them ready.

JOHN A. WARDER,
STEPHEN MOSHER,
Committee.

Cincinnati, June 9th, 1850.

Report on Fruit, August 1850.

To the Cincinnati Horticultural Society:

SINCE our last report, your fruit committee have had no sinecure office, specimens of various kinds having been constantly presented for inspection. It may be well to state, in this place, that we feel diffident of our abilities to discharge our duties in the most thorough and enlightened manner, but the attempt is always made to do the best we can, and it is hoped that we may continue to receive the aid of our fellow members, but more especially, their kind consideration of what may, by some, be conceived to be our errors.

Strawberries continued to be presented later than usual, and the season was so extended that one of the committee had them on his table so late as the 4th of July. In our last report, however, they were freely discussed, and we have nothing further to add in this, unless it be to reiterate that the crop was decidedly short.

Raspberries were unusually abundant and fine this season, but few of our members presented specimens—those noted were the White Antwerp, Fastloff, and Ohio ever-bearing; the latter, in the summer, is no better than the common black thimble berry, though very fine in September, when the crop on young wood is principally ripened. The Fastloff is gaining in reputation among our amateurs, and many plants are grown by the nurserymen, so that we may hope to see them in the market in a few years: we think, however, that the old English Purple and the "Scarlet Ontario," sometimes called Red Antwerp, have so strong a hold upon the affections of our cultivators, that they will scarcely be supplanted by the tender sorts.

Cherries have been more abundant and finer than we ever remember to have seen

them in Cincinnati, and they furnished many very beautiful displays upon our tables. We have had about fifty kinds presented, and experienced no little difficulty in the identification of some of them; first, because, like many others, we had so rarely enjoyed good opportunities of studying them of late years; and secondly, because of the great confusion in their nomenclature, the same fruit appearing with different names, and very different fruits claiming the same name.

Most of the finer sorts, however, were distinctly identified, and the character, especially those of the *seeds*, carefully observed. Among the new cherries exhibited, we should mention that called "German," shown by F. G. Carey, of Pleasant Hill, who is quite a successful cultivator of this delicious fruit. He considers it the earliest and most prolific variety, and a very vigorous tree. It originated near Colerain, in this county, and has been somewhat extended in that neighborhood.

A seedling morello was shown by A. H. Ernst, which the committee do not highly praise, as it is not adapted for the table.

Three new kinds, called "Burr's seedlings," grown on trees procured from John Burr, of Columbus, and fruited here for the first time. The numbers remain as received, 1, 2, 4, (10 died this year).

No. 1 is large, pale yellowish red—firm flesh like a bigarreau, of fine flavor.

No. 2 is very prolific and handsome, of good size, long, highly colored, bright red on a pale ground, and remarkable for the length of its stems, which are often, perhaps generally, curved. The flavor is not superior, smacking too much of the black mazzard.

No. 4 is small, red, and decidedly inferior—in short it is only a red mazzard, of the strongest flavor.

The Swedish, of Dr. Kirtland, was shown for the first time by Bishop McIlvaine, a very fine cherry, possessing superior merit, and deserving all the commendation we have read of it.

Some others were exhibited with which we were not familiar, and we were struck with the truth of the observation, that many intelligent cultivators really do not know the varieties of this agreeable fruit, as well as with the fact that no fruit is more improved by perfect ripening. Where birds and boys can

be kept away one or two weeks, makes a great difference in their characters. We ate the kind commonly known here as the Early May, which we believe to be the Early Richmond or Kentish, so late as the 23d of July. They were sound, though rather flat. The same tree has furnished fruit that was considered ripe on the 15th of May, on previous years.

We take this opportunity of recommending a few sorts which have been tested here, and are found worthy of cultivation:

Black Tartarian, Plumstone Morello, Mayduke, Davenport Red, Holman's Duke, White Tartarian, Belle de Choisy, Carnation, White Bigarreau, Yellow Spanish, Elton, Florence, White Heart, Sparhawk's Honey, Swedish, German, and last, though especially, Early Richmond.

Gooseberries have never before occupied so important a place in our Society, as during the past season—we have even been called upon to decide upon the merits of two seedlings, raised from the English sorts by James Hall—one of which, of medium size, and a deep green color, was really superior. Those from Mr. Longworth's garden were in the greatest quantities and variety, though one berry shown by J. Hall was the largest.

Currants, red, white and black, were before us, but we have to regret the want of opportunity to compare the newer and finer sorts.

Figs, of very fine size and appearance, were shown on the 20th July.

Apricots were very shy in their advances, as only a few specimens of three or four sorts were seen.

Nectarines were shown on the 3d August, the kind not identified.

Peaches came forward on the 6th and 13th of July, and more freely since; they ripened badly this year, but some specimens were very fine.

Of Apples we have had 25 kinds, most of which are well known, but some are new to us. The first were shown July 12th.

Prince's Early Harvest comes under different forms, and of varying quality; when true, it is one of the very best. A similar looking fruit, but smaller, was produced by J. Longworth, which is not known, but is of superior quality.

Among other fine fruit we have had the pleasure of eating, as well as of seeing, is the

Williams' Early, which is very fine and beautiful.

Pears made their debut on the 29th of June, in the shape of the Muscat, and we have been favored with their presence at every meeting since. The Madelline, in either variety which claims that name, is entitled to the praises of the committee; but the beautiful specimen of Doyenné d'Ete, shown by A. H. Ernst, July 20, won the admiration of all, and will go far toward redeeming the character of early summer pears, which is justly very low in most kinds heretofore grown most extensively.

Plums appeared on the 20th June, when specimens of Green Gage and the Early Harvest were brought in; some fine specimens of other kinds have been furnished since, but most of them immature. As many of our members have tried the shaking process upon their trees, we may hope that enough will have escaped the ravages of the curculio, to afford us an opportunity of testing their quality during the season.

The following premiums have been awarded:

Apples.

For the best half peck, 2 varieties, to M. McWilliams,	\$3 00
For the second best half peck, 2 varieties, to the same,	2 00

Cherries.

For the best two kinds, to F. G. Carey,	2 00
For the second best do. to Mrs. Saunders,	1 00
For the best display, to J. M. Milliken, of Hamilton, gratuity,	2 00
For a display, to J. C. Ferris, gratuity,	1 00

Gooseberries.

For the best, to W. Quant, including Rifleman, Wellington, Whitesmith, Crown Bob, and Sportsman,	2 00
For the second best do., to Jas. Hall,	1 00

Currants.

For the best, of two kinds, to W. Orange,	2 00
	\$16 00

All which is respectfully submitted by
JOHN SAYERS, }
JOHN A. WARDER, } Committee.

Report of Fruit Committee, August, 1850.

Rendered Sept. 6, with Awards for Summer Fruits.

AUGUST has truly been a month rich in fruits. As it has been blessed with an excess of Saturdays, the almanac makers having given it five, we have, as often, met to discuss the merits of bounteous supplies brought in by our zealous and liberal contributors.

PLUMS.—A vigorous and persevering trial of "the shaking process," paving, salting, hogs and chickens, manure heaps and water under, plaster of Paris sprinklings on the tops, cholera or malaria in the atmosphere, or lastly, "something else," or possibly all these means combined, have enabled us to share with the curculio, so as to ripen some of these, among the other delicious fruits of the season. Possibly the theory of our friend, Jos. Clark, of Brown Co., O., may have some truth, as the number of bearing trees has greatly increased. He suggested that these depredators should be treated upon the same plan proposed for thievish boys—"plant more fruit than they can all destroy, and thus have some left for the owner." One member of the committee has, however, been less fortunate, even on this *multitude plan*; having sixty or seventy fine trees in bearing, he did not succeed in ripening a peck of plums; these were chiefly Prince's Imperial Gage, and the tree which produced them was nearly under a thrifty oak tree. The chief expedient he employed was tying up the fruit in mosquito netting, but this was an *entire failure* in his hands.

During the month we have received and examined more than fifty varieties, many of them of extraordinary size and beauty; but most of those presented were not sufficiently matured for a proper appreciation of their merits, and this remark will also apply to some other fruits.

Some of the leading contributors were Messrs. R. Buchanan, F. G. Carey, R. Neale, John E. Mottier, N. Longworth, M. S. Wade, S. Cloon, B. V. Horton, Geo. Mendenhall, W. Orange, H. Ernst, etc., etc. Many of the sorts shown will prove of superior quality for the table; among these we mention the following: Green Gage, Emerald Drop, Prince's Imperial, Sharpe's Emperor, Hurling's Superb, Yellow Gage, Jefferson, Coe's Golden Drop, German Prune, etc. Several

seedlings were shown, but none of superior qualities, unless we except that from F. G. Carey, by the name of "*Ox Heart*," which is supposed to have originated in his neighborhood. It is small or medium size, oblong, greenish yellow, with a white bloom, flesh yellowish, rich and sweet, parting from the stone very readily; it has not been identified. Mr. Carey says it is not so liable to be attacked by the curculio as other sorts, and he has considerable variety. "*Darst's seedling*," shown by Dr. Whipple, is so like the Yellow Gage as not to be distinguished from it when mixed in the basket.

Nectarines have been presented in small parcels, but none ripe; indeed they appear so exceedingly susceptible to the ravages of the plum insect that few planters realize a crop, and most have been discouraged, and have destroyed their trees, or allowed the *Egeria* to kill them.

APPLES have been very abundant; those we have considered as *summer* apples have been already adjudged in a previous report, and we prefer making no awards of a general kind at this time, for very many of the autumn fruits are yet to come in. We take this opportunity, however, of referring to the *Benoni*, which has borne in many places this year, and sustains its high character as a bearer, a *beauty*, and as a good dessert and cooking variety. We have seen some specimens, too, quite as highly colored, as that used to illustrate Mr. Hovey's splendid work, and suppose it is considered fair for an author to select the best and handsomest specimen for his pictures. This plan certainly contributes to make a handsome book.

The summer apples continued to make their appearance in considerable numbers during the past month; among them a very tender little white apple, from Mr. Joseph Longworth, unknown to any of the Society, was considered a delicious table as well as cooking variety. The Gravenstein was also tested, and by one member of the committee considered superior, with its abundant sprightly juice; besides, it may be as well to mention that another fruit is to be brought in at the Fall Exhibition which claims the same title.

The Summer Seek-no-further, from T. V. Peticolas, was considered a delicious dessert fruit. The Red Astrachan was considered

poor. The Alexander retains the high estimate previously set upon it, but is not ripe enough to be tested.

Mr. Bateham brought an assortment of specimens from Mr. Lazell, of Columbus, among which one marked "*Williams' favorite*," was not correct. Some of the others were new to the committee.

T. V. Peticolas also favored us with a specimen of Corse's Indian Prince, new to most of the Society. It was pronounced good, though scarcely ripe.

The beautiful Hagloe Crab, with its delicate bloom, was presented by A. H. Ernst.

A great variety of apples was shown by R. Buchanan, some of them possessing good properties. W. Heaver has presented several fine specimens of apples that have not been frequently seen, including Gravenstein, Benoni, Minister, Corse's Indian Prince, etc. P. Kidd, of Kentucky, presented some beautiful specimens of Benoni, Gravenstein, etc.

PEACHES have been as plenty as blackberries, and many exceedingly fine specimens have been upon our tables, affording a most beautiful array, tempting the palates of visitors and members *almost* beyond their power of control.

The orchards in this neighborhood have yielded abundantly, which has not been the case for some years. The early fruit was very defective, wormy and rotted badly, which was attributed to the injury done by the frost. The committee have concluded to postpone awarding premiums on this fruit until the season shall have further advanced, but will briefly mention some of the kinds presented by some of the exhibitors:

By T. V. Peticolas—Honest John, Morris red, Oldmixon free, Large Barney, Crawford's Early and Late, Cooledge, Kensington, etc.

By C. P. McIlvaine—White Imperial, Crawford's, Oldmixon cling, Yellow Rare-ripe, etc.

By Dr. Mosher—Imperial purple, Morris red, Morris white, George IV., Baltimore rose, (cling,) Teton de Venus, Royal George, Tippecanoe, White Rareripec or Belvidere, etc.

By N. Longworth—Baltimore rose, etc.

By R. Neale—Crawford's, Cooledge, Walters, Hastings' Rareripec, Coles' Early, etc.

By S. M. Carter—Crawford's, Baltimore rose, Noblesse free, Bergen's yellow, Early York, Morris red, etc.

By D. McAvoy—Crawford's, Walters, Morris red, Penn's yellow, Mirabel, etc.

By W. Orange—Morris red, etc.

By M. S. Wade—Baltimore rose, Rareripes, Noblesse free, etc.

Seedlings of merit were exhibited by S. S. Jackson and Dr. Whipple, but when we have so many fine kinds in cultivation, it is scarcely worth while to run the risk of increasing the confusion already existing in the names of this fruit. A select list, made with care, so as to give a continuation through the season, would be a desideratum.

PEARS have been brought in by several contributors in considerable numbers, and though many of the kinds presented have not been mature, we have had an opportunity of testing various sorts and find some very fine summer pears among them. From Mr. Lazell, of Columbus, we received Beurré Knox, in a green, unripe condition, but it ripened two weeks afterward, and so strongly resembled B. Royal, that we supposed them identical; also, his seedling called "Sweet Water," which is well named and is a very good, sweet, juicy fruit, of very little other character in its flavor than saccharine. Bartlett's and Seckles have commenced ripening; also the Stone and Washington, the latter delicious. Julienne, when properly ripened, maintains its high reputation here.

"Colmar d'Été" of Mr. Ernst, has been pronounced delicious by all, despite its ugly looks; one of the committee considers it Colmar Epine.

Golden Beurré of Bilboa, by Dr. Mosher, was delicious.

Fulton is still poor and tasteless, being

merely sweet; its correctness may well be questioned.

Chelmsford was considered third rate, only fit for baking.

Several sorts, not named, have been examined and noted.

Van Mons Leon le clerc, from the President, a fine specimen, put away to ripen.

A seedling from T. V. Peticolas, was very fine and well worthy of cultivation.

Bloodgood was pronounced superior and delicious.

Mr. Longworth exhibited, among many others, a pear of peculiar shape, and deliciously flavored vinous juice, which is the St. Ghislain.

The following premiums are awarded:

Pears.

First premium to A. H. Ernst for Julienne, Colmar d'Été, Doyenné d'Été and others, \$3.00.

Second to N. Longworth for Washington, Julienne, St. Ghislain and others, \$2.00.

Plums.

First premium to F. G. Carey for best display, \$3.00.

Second to R. Buchanan, \$2.00.

Seedlings.

To T. V. Peticolas, a gratuity of \$2.00.

Apples.

First premium to W. Heaver, \$3.00.

Second to T. V. Peticolas, \$2.00.

S. MOSHER,

J. SAYERS,

J. A. WARDER,

} Committee.

From the Horticulturist.

A CHAPTER ON NEW PEARS AND PEAR CULTURE

BY THOMAS RIVERS, SAWBRIDGEWORTH, ENGLAND.

A. J. DOWNING, Esq.,

My Dear Sir—THE weather is cold and unusually unpleasant for out of door occupation, generally so pressing at this season; and so I have taken pen in hand to give you a little gossip about gardening matters.

And first, John Bull like, let me tell you

about the weather. We had an admirable winter,—no snow, and April weather in December, the greater part of January, (only a short interval of frost—lowest 17 to 15 degrees below freezing,) and all February; March, mild and dry, and this month cold, stormy and disagreeable. On the morning

of the 18th inst., after a night of snow storms with violent wind, my thermometer registered 19 to 13 degrees of frost; (it was suspended six feet from the ground, on the north side of a tree, fully exposed.) Our plum trees were white with bloom, and many of our pears, such as Louise Bonne de Jersey, Beurré d'Amanlis and others. They are now brown, and I fear the crop is gone. Beurré de Capiaumont is much later in unfolding its blossoms; so that of that and a few others we have hopes. But a frost, even when the bloom is not expanded, is generally fatal to pears. Their blossoms expand, and they look well; but instead of setting their fruit, it all drops at the critical moment. Last year, on the 27th of this month, we had a hoar frost, but the thermometer only registered 27. The pears were nearly all in full bloom; but although the frost was so slight, nearly all were destroyed. My experience, as to new varieties, is therefore very limited. I will however give you, from memory, a few notes on new pears,—objects, as I am aware, of great interest in your country.

Josephine de Malines. I ate my last specimen of this (I had only two,) the 28th of February; it was fully ripe, melting and sugary, with a *peculiar* delicious flavor, such as I never before tasted in any pear; not musky, or that flavor generally called "perfumed," but something quite *sui generis*; to a certainty, this will prove one of our *very finest* pears. In appearance, it is much like a middle sized Passe Colmar. The tree grows freely on the quince, but does not bear till three or four years old. This, as is now well known, was raised by *chance*, by the late Major ESPEREN, of Malines.

Belle Apres Noel. A chance pear, raised by the same gentleman. It ripened in January. A moderate sized, good, melting pear, i. e., a first rate pear.

Bergamotte d'Esperen. Ripened in March. Size third rate. Bergamot shaped. Flavor inferior. This pear, I have since learned, varies much in character, and requires a warm rich soil, and a warm season; when it is first rate, and keeps till April and May.

Beurre Bretounean. (Esperen's.) I have real pleasure in telling you all I know about this truly valuable pear. I have two specimens only; in shape and appearance they are much like Beurré Diel, and in size about equal

to a second or third sized pear of that sort; so that it is of a good size, although not No. 1. Technically, it is oval, or slightly turbinate. But the terms in general use, in my opinion, fail to give a correct idea of the shape of any pear, unless its characters are very strongly marked. On looking at my specimens to-day, kept on a shelf in a dry airy cellar, each wrapped in three or four folds of a piece of newspaper, I found them fine, and likely, in all appearance, to keep a month or six weeks longer. But as I was writing you this *pear gossip*, and felt anxious to know something about a pear so handsome, (color yellow, thickly—*very thickly* dotted with russet spots,) I could not help scooping out a taster. To my great delight, I found it a genuine melting pear,—rich, sugary and soft, *approaching* only to ripeness. I should calculate that it will be fully ripe about the middle of next month. Now when I looked round my fruit shelves, and found this the only melting pear left, (for pears in this country, in spite of the cloudy, cool, *unripening* summer of 1848, nearly all ripened prematurely,—Beurré de Rance in January; Ne Plus Meuris in March, instead of April, as usual, etc., etc.,) that this new variety should even surpass the description I had with it. The tree is remarkably hardy, and very thorny; it does not grow when grafted on the quince, unless "double-worked," and then but slowly, at least at present; but it is so new that one can scarcely describe what it will do. I have no doubt that, in due time, we shall find these "refractory" pears, which require double-working to make them take kindly to the quince, will also require to have a proper *kind* of pear on which to double-work them.

Susette de Bavay, (Esperen,) of which I have no specimens, I have every reason to believe, will prove a late pear, equally as valuable as the preceding. The readers of the Horticulturist should know that *Glout Morceau* has been sent out for this pear; it was, I think, in 1845, that a well known nurseryman in Belgium, professed to have all the pears raised by the late Major Esperen to dispose of. I received from him the following: *Susette de Bavay*, *Beurre Lombard*, and *Buerre d'Esperen*, all of which proved to be *Glout Morceau*. The true *Susette de Bavay* has shoots of a light greenish brown, entirely thornless; and the tree is so inclined to the

pyramidal shape, that it will form a handsome close pyramid, almost without attention. All the above, I understand, were raised from seed by chance, i. e., seeds of good pears were sown without any attention to impregnation, or going through two or three generations. What a comment thus offers itself on the fanciful theory of VAN MONS; and what encouragement for us all to go and do likewise.

You will see in the "Miniature Fruit Garden," which I now send you, allusion made to a seedling from the Easter Beurré. My specimen ripened this season towards the end of February. It is almost more than melting. Mr. THOMPSON writes me, that although "not quite so sugary as its parent, it is a first rate late pear." The parent tree is the thorniest, ugliest, vagabondish looking tree you ever saw.

Although time has tinted me with sober grey, I am still annually raising seedlings. My mode of management is perhaps original, and may amuse you.

To raise late pears is my grand object; and to effect this, I take pips from Beurré de Rance, Beurré d'Arenberg, Fortunée, Ne Plus Mouris, Winter Nelis, Passe Colmar, etc. These are sown in seed pans, and placed in gentle heat under glass. They soon spring up; and as soon as five or six leaves are formed, they are placed singly in small pots, then shifted into larger pots, and placed on a gentle hot-bed in the open air. Last year, with this mode of culture, I obtained a growth of two feet, and a thickness equal to a large quill. Each sort is kept carefully named and labelled, as follows: "from Passe Colmar," "from Beurré d'Arenberg," etc. This spring they have been planted in rows, thus: No. 1, a seedling; No. 2, a pear, worked on a quince; No. 3, a seedling; No. 4, a pear, worked on a quince, and so on, through the row. The tops of the seedlings were cut off in January, and they have been recently grafted, commencing with No. 1, which is grafted on No. 2; No. 3 on No. 4, and so on, through the row. Each sort has its label as above; for of some such as the Ne Plus Meuris, there are twenty or thirty which follow each other regularly in the row. Now by this method great interest is created, as they are double-worked, and I trust will soon be in bearing. In the first place, the parent tree will always be known; and the difference in the time of bearing be-

tween the seedling and the graft from it, will be accurately ascertained. This, to me, is an object of great moment; for I do not remember ever seeing or reading any thing relating to it.

I hope, D. V., or, perhaps, I had better say, under God's blessing, to solve this very interesting horticultural problem.

I forgot to say, that I prefer to take the pips (seeds) from fruit gathered from trees standing *isolated*. The race is then more pure; and I observe that some varieties produce seedlings bearing much resemblance to their parents in their habits. This is particularly apparent in those raised from Ne Plus Meuris. By the way, do you know that *our* Ne Plus Meuris is almost, or quite, unknown on the Continent? Both in France and Belgium, Beurré d'Anjou, an excellent pear, but not nearly so late, bears that name.

Seedlings from Beurré de Rance vary in a most extraordinary manner. Some are very delicate and slender; some robust and with large leaves; others covered with thorns.—Those from Passe Colmar seem to bear a close resemblance to their parent, as do those from *Fortunée* and *Buerre d'Arenberg*. If the late Mr. KNIGHT had crossed some of these fine pears with such lasting pears as Leon le Clerc de Laval, and other long keeping baking pears, how rich we should have been. This is a field still open. Mr. KNIGHT employed parents, but ill adapted to produce good results; and thus, after years of experiment, only gave us one pear really fine and good,—the *Monarch*.* This is "pear gossip;" therefore I am privileged to ramble. A new pear:

Buerre Goubault bore fruit here last season. It is a very handsome Doyenné-like pear, about the size of Doyenné Blanc, with a smooth, shining, greenish-yellow skin; flesh exceedingly melting, sugary, and good. Ripe in September.

Are you aware that *Colmar Charney*, which I saw in France three or four years since eaten in autumn, and which was pointed out to me as a very fine late pear, proves to be the *Amrial*, or *Arbre Courbé* of Van Mons,—an excellent October pear? *St. Marc* is Urbaniste. For two seasons I did not detect this, owing

* Of which, strange to say, from causes perfectly unexplained as yet, not a single *fine flavored* specimen has yet been grown in America.—Ed.

to the fruit of one being from a tree on the quince, the other from a tree on the pear stock. We nurserymen, as soon as we detect an error, ought to "make a clean breast and confess."

Episcopal is also, I strongly suspect, only *Fortunes*. From my trees, the fruit of the former was green; of the latter, covered with russet; but the leaves and shoots of the young trees made me look more closely into the matter. This last year the latter was excellent.—nearly as good as *Beurré d'Aremberg*, and kept sound and good till June. In the south, with you, this will, I think, prove worthy of extensive cultivation.

Crassane d'Hiver, (Bruneau,) or *Beurré Bruneau*, is a handsome and delicious pear. Form roundish; size No. 2. My specimens ripened towards the end of last March. They were melting, with a very high vinous perfumed flavor, and were delicious.

Mr. WILLIAMS, of Pitmaston, has raised a new *Winter Gansell's Bergamot*. I enclose his description. This will, I think, prove something out of the common way.

Your orchardists ought to know one of the most profitable pears they can plant,—the *Colmar d'Ete*, (or *Colmar Prince*, and *Colmar d'Automne*; for such are its synonyms.) It is one of the most vigorous growers of all pears on the quince, to which it seems to unite itself without the usual swelling over, at the junction of the graft with the stock. Its bearing qualities are, to quote *Dominie Sampson*, prodigious. The fruit hangs in clusters, like, to use a rural expression, "ropes of onions." I know not why this pear should be called a *Colmar*. It has not the least family resemblance to that race. It is of the second size, rather long, something like the *Jargonelle*, yellowish-green, with red next the sun; very juicy and refreshing, but not melting, neither is it a breaking pear; still, it is very agreeable, and likely to be popular, as it bears carriage well. It has ripened here, these two last seasons, about the end of September.

Among the pears of the late M. ESPEREN, and likely to prove of much value, is the *Cassante de Mars*. This was originally named by him *Bonne de Malines*; but on finding that name a well known synonym of the *Winter Nelis*, it was changed to the above, which is very expressive of its quality. For in March, it is hard and breaking; but if wrapped in

paper and kept carefully, it may be preserved till June, and even July. It then becomes soft, perfumed, and very agreeable, like *Fortunes* and other late pears. It cannot always be preserved; for in some seasons, at least in this country, the hardiest and latest pears will ripen prematurely. We shall, perhaps one day, know the reason of this variation. I think I have generally noticed that when our summers have been cool and unripening, our pears have ripened prematurely.

I hope this season to hear from you, respecting the identity of *Beurré d'Aremberg* with *Orpheline d'Engheim*,—the *Soldat Laboureur* of France. With me, the trees are most distinct, and remain so, whether young or old, on the quince or on the pear, in all soils, and in all situations. The fruit of the former, with me, is generally a trifle smaller; but it is in its shoots and general habit that it differs so much. Its shoots are of a darker brown, always thorny, its leaves more pointed, and smaller than the latter. When in Belgium, in 1847, I found two pears there,—one called *Orpheline d'Engheim*, the other *Beurré d'Aremberg*. I imported both, and find them exactly identical with those I have for some years cultivated.

My *Beurre d'Aremberg* I received from the Horticultural Society of London about fifteen years ago; and *Orpheline d'Engheim* I received from Van Mons about the same period, under the name of *Beurre d'Aremberg*. Finding it different to that which I possessed, I distinguished it as "*Beurré d'Aremberg*, (Van Mons,)" in my catalogue for several years. I then found that the *Soldat Laboureur* of the French, and *Orpheline d'Engheim* of the Belgians, were the same; and I may also add that the pear "*Vrai Aremberg*" is the same. In the English nursery-series, both varieties are cultivated, mixed generally, under the name of *Beurré d'Aremberg*.

You will smile when I tell you that, out of my collection of nearly 1000 sorts of pears, I cultivate for profit, i. e., for their fruit, to send to Covent Garden Market, four, viz:—*Williams' Bon Chretien*, (your Bartlett,) *Beurre d'Amanlis*, *Beurre Capiaumont*, and *Louise Bonne de Jersey*.* Of the first, I have about 500 bearing trees, from five to

* How exactly this corroborates the advice we gave to orchardists, as contrasted with amateurs.

twenty-five years old, on the pear stock. Of the second, about the same number, on the quince, as pyramids. This latter does admirably on the quince; and an orchard of pyramids would be very profitable. (Let some of your young cultivators recollect this.) Of the third, about 2,500 fine trees, from five to fifteen years old. They are beautiful trees, and perfect pyramids, growing so naturally, with but very slight attention to shortening their side shoots. Trees of this kind are all on pear stocks. Lastly, I have 2,500 trees growing in my orchard, of *Louise Bonne de Jersey*, all on the quince. These are three to six years old, all pyramids, full of blossom, and charming trees. What a comfort, that we have no pear blights in this country, no frozen sap, etc. A pear tree, once well planted here, progresses not rapidly, but surely. I find that my trees of *Beurré Capiaumont*, ten years old, on pear stocks, make, annually, shoots from twelve to fifteen inches in length. *Louise Bonne de Jersey*, on quince stocks, five years old, as nearly as possible the same annual growth. These trees are annually covered with blossoms, and give fine crops. It may, perhaps, assist some of your young cultivators if I give, in a few words, the best mode of combining a pear orchard with a nursery or kitchen garden. I think one or two of your countrymen have already taken notes of it, but perhaps not.

I purchased, some few years ago, a considerable quantity of freehold land; and not feeling sure that the demand for roses and ornamental shrubs would continue, I resolved to plant pear trees, and thus have two strings to my bow. I commenced, by purchasing all the old and overgrown trees I could find in the London nurseries. Many of them were as stout as the small of a man's leg, and seven to eight years old. These were planted in rows from N. E. to S. W., 20 feet row from row, and 10 feet apart in the rows,—a path 2 feet wide on N. W. side of row, and border 18 feet wide. After remaining one season, these were cut down and grafted,—half the trees as standards, and half as half-standards, regularly alternating in the rows. These are all *Beurré Capiaumont*, and most charming trees, just ten years old. The half-standards are finer trees, and much handsomer than the full standards.

Experience soon told me that 20 feet, row

from row, is not quite enough. The border for cultivation is too narrow. In my next plantation, I planted my rows 24 feet apart. This is of *Louise Bonne de Jersey*, as pyramids on the quince. They are only five feet apart in the rows; so that they will soon form a perfect barrier to the N. W. wind. They have regular *summer pinching*, etc., etc., to keep them in a nice pyramidal shape. A path 2 feet wide is on the N. W. side of each row; and a border for young trees in rows, etc., etc., 22 feet wide.* This plantation of *Louise Bonne* pears contains 2,500 trees. The effect is admirable. The profit is, and will be, very great. By having the trees N. E. to S. W., you will at once see that the trees give but little shade; the path on N. W. side of row is the only part much shaded. [In this climate, on the contrary, shade for the borders is desirable.—ED.] The soil is a hazel, friable loam, from eighteen inches to two feet in depth, under which is a friable white clay, full of chalk stones. This gives a yellow tinge to the leaves of trees, when too near the surface. Under the white clay is sand; so that this soil is never too wet, and never too dry,—just the happy medium for pears. I may observe, that although the soil and climate, in the valley of the Thames, is much more favorable than it is here for many kinds of pears, yet the *Beurré Capiaumont* is much inferior.—There, it is covered with russet, and is of a greenish yellow. Here, it is bright scarlet and gold, and really a superb pear. The *Louise Bonne*, on the quince, is equally fine. All those who intend to grow pears for supplying the markets, must watch them carefully. With what a large portion of my life has my experience been bought. Listen, and I will tell you some of my trials. *Easter Beurré* I thought a splendid pear, and one that must always sell well. I grafted three to four hundred fine trees, purchased of the nurserymen, as before stated. The grafts grew beautifully, bloomed bountifully, bore a fine fruit, which *was hard, and never ripened*. After seven years' trial, half were grafted with *Capiaumont*, (all right,) the remainder with *Knight's Winter Crassane*, a vile pear for the market. It bears abundantly, but has

* When the trees increase in bulk, I shall have a path, three feet wide on each side of the row. This will leave a border in the center 18 feet wide; a most eligible site for young trees, or other crops.

no flavor or reputation. These trees are this spring grafted with B. Capiaumont.

The self same history, (of years wasted,) appertains to Beurré de Rance, Beurré Diel, Hacons' Incomparable, Althorpe Crassane, Knight's Monarch, — (I suffered 150 fine trees of the thorny, spurious sort, first sent out by the Horticultural Society, to reach the age of ten years before I would re-graft them;) Summer Franc Real, Bezi de Cais-say, Passe Colmar. None of these pears, I found, would *pay*; and so they are all grafted with B. Capiaumont. In this country, the *million* seem to buy pears freely in the *autumn* only; and, therefore, too few sorts can scarcely be grown. To some of your young cultivators, I can also give the result of my experience as a nurseryman. Autumn pears, such as I have named, are all gathered and sold *before the tree business begins*.

I have 150 fine trees of *Marie Louise*, just twenty years old. They are, *as usual*, full of *blossom*; but it is five years since I had a crop, which is also the case in the pear gardens near London. I am, dear sir, yours truly,

THOS. RIVERS.

Sawbridgeworth, Herts, England, April 26, 1849.

[We commend the foregoing most valuable article to the careful perusal of all our pomological readers. Mr. Rivers is not only the most extensive grower of fruit trees in England, but he is also one of the most accomplished English pomologists; — and, as our readers will see, has had not a little experience in growing fruit for market.—Ed.]

PRAIRIE ROSES.

THESE climbers are becoming deservedly great favorites with us, and indeed their exceeding luxuriance and beauty entitles them to all the admiration that can be lavished upon them. Well do I recollect the early impressions received from the first view of the single wild variety, flinging its branches out upon the dark and shining green foliage of the jack-oaks, upon the borders of our small prairies in central Ohio; those beautiful little green intervals which once formed so charming a feature in the landscape, now scarcely to be recognized, since the axe and the plough have effaced the original distinctions set up by Dame Nature between woodland and

prairie, and have rendered both alike mere arable land, very productive and very useful, but no longer so poetical as of yore. The following account of their transformation into double flowering varieties, of different color, habit, and time of blooming, is taken from the Horticulturist for August, furnished by A. Fahnestock to the *Syracuse Journal*.

Those of us who are familiar with Feast's double prairies will be surprised not to find any mention of *superba* or *pallida*, and some others. Mr. Fahnestock also omits all notice of two which are very great favorites here: the "Montjoy multiflora," believed to have been found wild on the Licking river, in Kentucky, and the semi-double, peach-blossom-colored sort, found by Dr. Frank Worthington near Chillicothe, and named for the discoverer.

Mrs. Hannah Levering, of Baltimore, Md., having removed to Lancaster, Ohio, forwarded seeds of the Wild Prairie Rose to Mr. Samuel Feast, an eminent florist of Baltimore, who planted the same, and after they had vegetated, permitted a few to climb over a bed of Noisette roses. The blossoms of the Prairie roses became (many of them) impregnated from the pollen of the Noisettes. The seeds from the Prairie roses were carefully gathered and planted, and from the many seedlings the following new varieties were produced, all fine double roses:

1. **BEAUTY OR QUEEN OF PRAIRIES.**—Large, beautiful, deep pink; very double; exquisite form; frequently with a white stripe. This is the so called double Michigan, prevalent in your city.

2. **PERPETUAL PINK**—Pink, changing to purple; very double; flowers several times during the season; large clusters.

3. **BALTIMORE BELL.**—Blooming in large clusters; full double; light blush, with a deeper center, (almost white the second day). This rose possesses a valuable character, different from the other two, being as fragrant as a tea rose[?]. These are all vigorous climbers.

Since the above have been produced, Mr. Joshua Pierce, of Washington, D. C., procured a number of seeds of the single prairie rose, and planted them with reference to a hedge, a portion of them growing contiguous to a number of rose bushes of the old Mai-

den's Blush, and running over them. Seeds of these were again taken and planted, and from many hundreds he had the pleasure of sending out the following beautiful double climbing roses, of the same character as the three above described, raised by Mr. Feast, and vieing with them in beauty, some even excelling them, a number of them being quite fragrant.

1. **PRIDE OF WASHINGTON.**—Very dark rose; very fine form; cupped; full double, resembling Jane; blooms in clusters of about twenty flowers; habit vigorous and good.

2. **ANNA MARIA.**—Pink, with rosy center; cupped, and full double; beautiful large clusters, twenty to thirty flowers, quite distinct from any of the others.

2. **EVA CORINNE.**—Flowers large; very delicate blush, with beautiful carmine or rose center; globular, and very double; clusters medium size, from ten to twenty flowers; rather compact; foliage medium; habit vigorous, and very erect. This is the most delicate of all the Prairie roses, and its clusters of blush flowers, with their deep centers, which are perfectly globular, and *quite fragrant*, entitle it to a prominent place in every garden. It blooms quite late.

4. **MISS GUNNELL.**—Elegant delicate blush or buff; full double; clusters large, from twenty-five to thirty; foliage large; habit vigorous, one of the very best; quite unique for the delicate tint of its flowers.

5. **RANUNCULIFLORA.**—Pale blush; very handsome; full double; clusters large, twenty-five or thirty flowers; slightly fragrant; blooms rather late.

--6. **VIRGINIA LASS.**—Splendid blush; in large clusters; full double.

7. **MRS. HOVEY.**—Splendid white; very double, and beautiful; large clusters; the only double white Prairie rose. The flowers of this variety are larger than any of the others, and decidedly the best of the twelve seedlings; it is of superb habit, with splendid deep green foliage. As it is a pure white, it is the greatest acquisition which has yet been made to the double Prairies.

8. **JANE.**—Flowers medium size, of beautiful lilac rose; imbricated, and very double; clusters large and compact, twenty-five to thirty flowers; habit strong and vigorous.

9. **PRESIDENT.**—Blush, with rosette in the middle; compact, and very double; fifteen to

twenty in a cluster; habit vigorous and good. This is the latest flowering variety.

10. **TRIUMPHANT.**—Deep brilliant rose; imbricated; very double and fine; clusters large, twenty to thirty flowers; foliage large and handsome; bright green; deeply and sharply serrated. This variety is remarkable for its ample and beautiful foliage, as well as for its deep and brilliant rosy flowers.

LINNÆAN HILL BEAUTY.—Pale blush; very fine indeed; much admired; clusters large and full double.

12. **MRS. PIERCE.**—Not yet bloomed for us, and therefore cannot describe it. These twelve are Mr. Pierce's seedlings, and all very handsome. We have fine specimens of all upon our grounds.

BEES.

To the naturalist, this insect presents an object of delightful contemplation, and even to the casual observer, it is not entirely devoid of interest.

Perhaps a slight description of this little busy insect, in connection with a few facts, may be perused with interest and profit by the readers of your interesting and valuable sheet. When a hive becomes very full, by the increase of young bees in the spring, the old queen leaves it to seek a new home, and such of the other bees as choose to follow her fortunes (led by their great regard and affection for their sovereign) quit the hive at the same time, the rest remaining at home. This is termed *swarming*.

The bees which leave the hive, led by the queen, alight upon some neighboring bush or tree, entirely surrounding and covering up her majesty. Here, clinging to each other, in the form of a large ball, they will remain, if undisturbed, for a longer or shorter time, according to circumstances. Immediately after they have thus alighted, if carefully watched, a small number may be seen to leave the mass, and fly off in various directions. These would seem to be a deputation which are sent out as spies, to discover a new home. Some of these may be seen frequently returning, as it were, to make their reports; and as an evidence that honey had not been the object of their flight, no wax or pollen can be seen upon them, as is the case when they return to the hive upon ordinary occasions.

As soon as their spies return with a satisfactory report, (which is sometimes not until the next day,) they leave the bush, and, rising high in the air, start off in a perfectly direct line for their new habitation. This is sometimes at a distance of several miles, and may be located in an old hollow tree, or cleft of a rock. Sometimes they even enter the dwellings of men. A friend of mine in this town once heard a humming or buzzing noise over his head at night, as he was lying in his bed; thinking that it proceeded from the garret, he made an examination, when the noise seemed to be beneath his feet. The next day the mystery was solved, for being out in the yard, he saw some bees going in and coming out of a hole in the side of the house. He then went to the garret, and by listening attentively, discovered their exact location near one corner. He built a small room in this corner, and then sawed through and took up the board which covered them, thus giving the bees a large hive to work in; and work they did, for he told me years afterward, that this room had supplied the family with an abundance of delicious honey up to that time.

I may as well here remark, that, for common use, large hives are injudicious, as the bees, if placed in them, never swarm, thus preventing any increase of the stock.

The swarm, however, is not often allowed to escape in the manner just described; for, being discovered by some of the family, they are immediately "hived," viz.: an empty hive, or box, is placed upon the ground or table, and raised a few inches from it, then the branch or twig upon which the bees have alighted is cut off and placed under the hive, the inside of which has been previously rubbed with lemon balm leaves, (as it is thought that the fragrance of this herb is attractive to the bees,) and almost immediately they ascend and take up their abode within the hive. In the evening, after every thing is quiet, the hive is removed to the place which it is permanently to occupy.

A swarm usually leave the old hive in some very warm, clear day, between the hours of nine in the morning and four in the evening. It is frequently the case, that in eight or ten days after the swarm has left the hive, a second one makes its appearance, and is of course to be treated in the same manner as

the first. It does not always happen, however, that two swarms are obtained in one season, though it sometimes occurs that three large ones are hived. A friend at the west had one spring but one hive of bees. They swarmed very largely and very early; it was a fine "bee season;" in a week the old hive sent out another colony, and still later, a third. The swarm that came first also divided and sent out a strong colony.

The year was a good one, and they all did well, so that in the autumn he had five hives of bees, which yielded him, beside, nearly ten dollars worth of beautiful honey. But this was a rare case, and such astonishing success is by no means common. It is often the case that the third swarm is so feeble, and comes so late, that it is unable to lay up a sufficiency of food for the winter, and soon perishes. When the owner thinks that this is likely to be the case, he should remove the queen from the middle of the swarm, when they have settled upon the branch, and the bees will then return to the hive from which they came. It might at first seem a hazardous undertaking to open a swarm to remove the queen, but it is, with common caution, quite easy. I will not here give the process, for I fear that I shall spin out this article to an unreasonable length, and I have a number of other things to mention. If, however, it should seem to be the general wish, I may at a future time say more on the topic of bees, and also of some other insects.—*Dollar Newspaper.*

From the New England Farmer.

PHACH LEAF CURL.

MR. EDITOR: On the 29th of May last, I made an excursion from this place to Marshfield; the morning was rainy, but the day was a favorable one for traveling. On my way I was exhilarated by the splendid exhibition of Nature in her efforts at ornamenting the fruit trees with an uncommon mantle of blossoms. I should think at Marshfield they were three or more days in advance of the fruit trees in Wilmington. The 30th and 31st days of May, and the 1st day of June, were very cold, uncomfortable days for the season; the winds from the north-east, driving the clouds from the ocean, with the chilly air charged with mist from the icebergs

drifting from northern climes, made an overcoat a necessary appendage to add to one's comfort. On the 1st day of June, some of the fruit growers at Marshfield saw indications of blight commencing upon their peach blossoms, which boded unfavorable omens to a coming crop. On my return home, I found our own peach trees had been very roughly handled by the wind.

After the abatement of the storm, and the weather became mild, the young peaches began to show themselves, and the curl of the peach leaf commenced, and progressed rapidly until nearly every one existing upon the trees during the storm was completely crimped. We examined the curled leaves, and could discern no indication of animal life in any form upon them, nor have we up to the present time. The leaves upon the peach trees previous to the May storm have been gradually dropping from the trees to this time, and are nearly all fallen off; and those now upon the trees are mainly from new shoots, and appear green and healthy. There may be different causes for the curl in the peach leaf, but I feel confident that the cold northerly and easterly winds in the month of May produced the blight on the leaf, followed by the curl. The violent and long-continued cold winds caused stagnation in the minute sap-vessels of the leaves, which produced premature decay and falling off, as in autumn.

The bodies and leaves of trees have their sap-vessels for the same purpose that animals have their blood-vessels; whatever takes place to the injury of either, in such manner as to destroy the circulation, will produce disease or mortification of the affected part as well in trees as in animals.

As there has been considerable discussion upon the peach leaf curl by writers on the subject of fruit trees, I thought it possible that some light might be shed by the above remarks, which were carefully made from observation. With much respect,

SILAS BROWN.

Wilmington, Aug. 1, 1860.

REMARKS.—The views of Dr. Brown are the same as our own, in regard to the blast on the peach leaf. It came too suddenly and extensively to be the work of insects, and at a season that is unfavorable to their propagation and operations. It could not be caused

by the effects of the winter on the trees, for the winter was favorable, and we had young seedlings seriously affected in the leaves, while every part of the tree, both root and branch, was perfectly sound.—Ed.

From the Wool Grower.

The Orchard—Best Varieties of Fruit.

MR. EDITOR:—To the question so often propounded, "What varieties of fruit would you recommend for a small fruit garden?" I answer, very much will depend on the extent and location of the grounds. Provided the soil be good, and the location favorable, then we may grow all the fine hardy fruits. On a stiff clay the peach rarely succeeds. On a clay-loam and soil rather moist, the plum does by far the best. The pear will grow in greater perfection on a deep rich loam, than on a wet soil, or on a very dry, sandy, or gravelly soil. Pyramidal dwarf pear trees, worked on the quince, require a rather low, damp, (not wet,) soil. The peach succeeds best on a dry sandy soil, sheltered from the west winds. The cherry in this section of country does well on almost any soil not absolutely wet. There is one secret, however, connected with growing fruit *successfully* not generally known, or rather, I should say, not generally put in practice. The secret is to keep the soil very rich, and suffer no weeds, or grass, or any other vegetable to grow within several feet of the trees. Few investments pay better than choice fruit trees. Indeed, I know of many individuals who are now coining money from the avails of their orchards.

From my own experience and observation I can with great confidence recommend the following varieties of fruit; all well adapted for family use and for the market. For twelve varieties of the apple take the following:—

APPLES.—*Early*.—Early Harvest, Large Sweet Bough, Williams' Favorite, Summer Rose.

Autumn.—Golden Sweet, Fall Pippin, Pomme d'Neige, Jersey Sweeting.

Winter.—Baldwin, Roxbury Russet, Esopus Spitzenburgh, Rhode Island Greening.

PEARS.—FOURTEEN VARIETIES.—*Early*.—Madeleine, Bloodgood, Bartlett, Rostiezer.

Autumn.—Buerré Diel, Flemish Beauty,

Fondant d'Automne, Seckel, White Doyenné, Stevens' Genessee, Louise bonne de Jersey.

Winter.—Winter Nelis, Beurré d'Aremberg, Glout Morceau.

CHERRIES—TWELVE VARIETIES.—Early—Knight's Early Black, Bauman's May, Mayduke, Black Tartarian, Elton, Graffion, Bigarreau, Holland Bigarreau, Downton.

Late.—Downer's Late Red, Napoleon Bigarreau, Butner's Yellow.

PLUMS—EIGHT VARIETIES.—Purple Gage, Imperial Gage, Jefferson, Washington, Coe's Golden Drop, Frost Gage, Bleeker's Gage, Green Gage.

PEACHES—SIX VARIETIES.—Large Early York, Early York, (serrated leaf,) Grosse

Mignonne, Royal George, Crawford's Early, Noblesse.

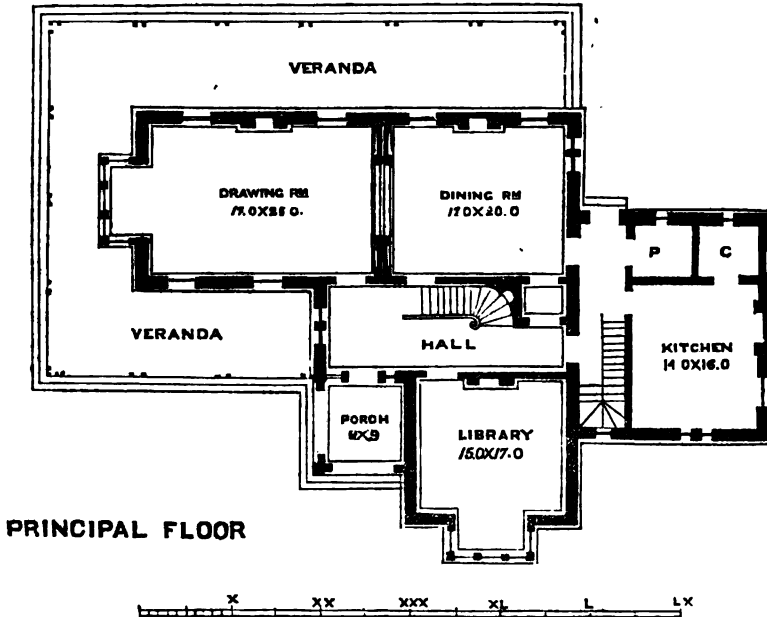
STRAWBERRIES.—Large Early Scarlet, Boston Pine, Burr's New Pine.

It is truly gratifying to witness the attention now being paid to the planting out of choice fruits, in various parts of our country. On every farm there should be a fruit garden. Let it be fenced off by itself, planted with choice varieties like the above. Take the same care of them as is paid to the garden, and in a few years they will yield a larger income than any other investment.

Yours, very truly,

B. HODGE.

August, 1850.



ARCHITECTURAL DESIGN.

In this design the endeavor has been to produce a commodious, effective and convenient plan, combined with an exterior at once picturesque, harmonious, and expressive of the elegant refinement associated with the life of a retired country gentleman.

The style is Italian, bracketed. Its characteristic features are overhanging eaves, deep shady verandas, bold recessed bay windows, slight and graceful balconies, awnings, etc., all supported by or ornamented with brackets. The style is susceptible of a

variety, in form and detail, equalled only by Gothic itself, while its ornaments are such real luxuries within themselves as to render it, of all others, perhaps, the best adapted to our climate and tastes.

The plan may be readily understood by a glance at the engraving. From a porch 9×9 feet, in the clear, we enter the hall, 10×30, whence an easy, if not immediate access is obtained to all of the principal apartments. Opposite the entrance is the drawing room, 17×25, lighted by a fine bay, and four smaller windows, all opening upon the veranda, 10 feet wide, which, by subduing the light and completely sheltering the apartment, renders it one of the most pleasant in the house. *En suite*, and communicating (by sliding doors) with it is a dining room, 17×22, also opening upon the veranda, and separated from the kitchen by a rear passage 5 ft. 6 ins. wide, which, while it serves to exclude all unpleasant odors, renders the principal rooms more private by

affording a rear entrance and back stairs for servants.

The library is easy of access, yet quiet and retired, 15 by 17 feet in the clear, exclusive of a bay window, which, to make the apartment still more secluded, might be filled with stained glass.

The kitchen (16×14) with its accessory store room, china closet, etc., is placed in a separate wing, but perfectly convenient to the dining room.

Upon the chamber floor we have four excellent bed rooms, a boudoir or dressing room in the tower, a bath room and water closet over the back hall, and two attic rooms for servants in the kitchen wing.

By extending a portion of the hall in height, a stairway can be obtained to the upper part of the tower, whence we may imagine a fine prospect of the surrounding country.

J. K. WILSON, Architect.

Art Union Buildings, Cin., O.

PEACHES REPRODUCING THEMSELVES.

We give the following account for what it is worth, not knowing the parties, nor vouching for the correctness of their judgment. Some peaches will reproduce their like from seed; but the general experience is, that they have a tendency to go back to inferior sorts.—Ed.

A correspondent of the Cultivator, Mr. Craighead, of Whitehall, in Cumberland county, Pennsylvania, gives the following account of his success in raising seedling peaches, both early and late, of some known and favorite varieties:

Seven years ago, I went to Mr. Conklin's extensive peach orchard, about the 20th September, and bought two bushels on purpose to get the seeds. We sought the very best we could find. His early peaches were nearly gone; I took the last on the trees. That brought the ripening of them, to the period I picked the peaches off, twenty days later. The Columbia was just beginning to ripen:

I got the first ripe. That brought them two weeks earlier than the original. I planted the stones in rows, like planting potatoes; covered shallow, following nature as near as I could. All brought the same sort in color and appearance. The result is, I have the Morris White through the season; the Columbia and Early York also, so that the whole space is now filled with the same species from the last of August to the 20th of October; and any farmer, if he has one superior peach tree, can raise seedlings from it, and change to early and late to last the whole season. But plant the stones when fresh, if you expect a good tree; for if they become dry, you will get a poor peach—something resembling the original, but worthless. My seedlings, out of about five hundred trees, which I planted seven years ago, contain only about four trees that are not as good, and some are much better than the original.—*Cleveland Democrat*.

LITERARY NOTICES.

AMERICAN FRUIT CULTURIST, By J. J. THOMAS.

IN very early life I had the pleasure of visiting DAVID THOMAS at his delightful residence in western New York, and could not fail, even as a boy, to be struck with the admirable effect which must have been produced upon young persons, and especially upon his own children, by such a father, and the circumstances by which he surrounded them.

Habits of industry and a true love for rural pursuits had produced their natural results; a most delightfully comfortable home, surrounded with a capacious garden well filled with choicest fruits and flowers—among the latter many of our charming native plants were nurtured with care. David Thomas was one of the few in his day, who appreciated the advantages, to a farmer even, as indeed to all men, of a knowledge of natural history—his sons consequently became botanists and geologists—and here we have one of them who takes rank among the first pomologists of our country. The evidence of this is in the work before us, which manifests careful and laborious research, close and continued observation, good powers of description and an excellent systematic classification, so much needed in a catalogue of “the principal American and foreign fruits cultivated in the United States.”

The work is divided into two parts—the former elementary, and the latter descriptive and systematic—each of these contains twelve chapters.

The directions for planting, pruning and propagating as given in Part I, are founded in good sense and practical observation, and deserve to be well studied by the orchardist, or even the cultivator of a limited fruit garden. To both classes of readers it is heartily recommended as an invaluable handbook.

In Part II, the different fruits are taken up in detail and systematically arranged and discussed, with preliminary remarks as to their treatment, suitable soils and situations, and the enemies to which they are subjected.

The peculiar feature of the work, beside the distinct descriptions, not only of the fruit, but of the foliage, wood, seeds and flowers, is the thorough classification which has been attempted, which to a mind fond of *order* and arrangement, is a very great desideratum. Some even object to the difficulty of finding what they want among the descriptions—but this very classification and the index appear to obviate all difficulty. The only deficiency observed, and one which has been so ably supplied by Mr. Downing, is the want of synonyms—it is, however, a work which must require years of study, to be properly effected, so as to be truly complete.

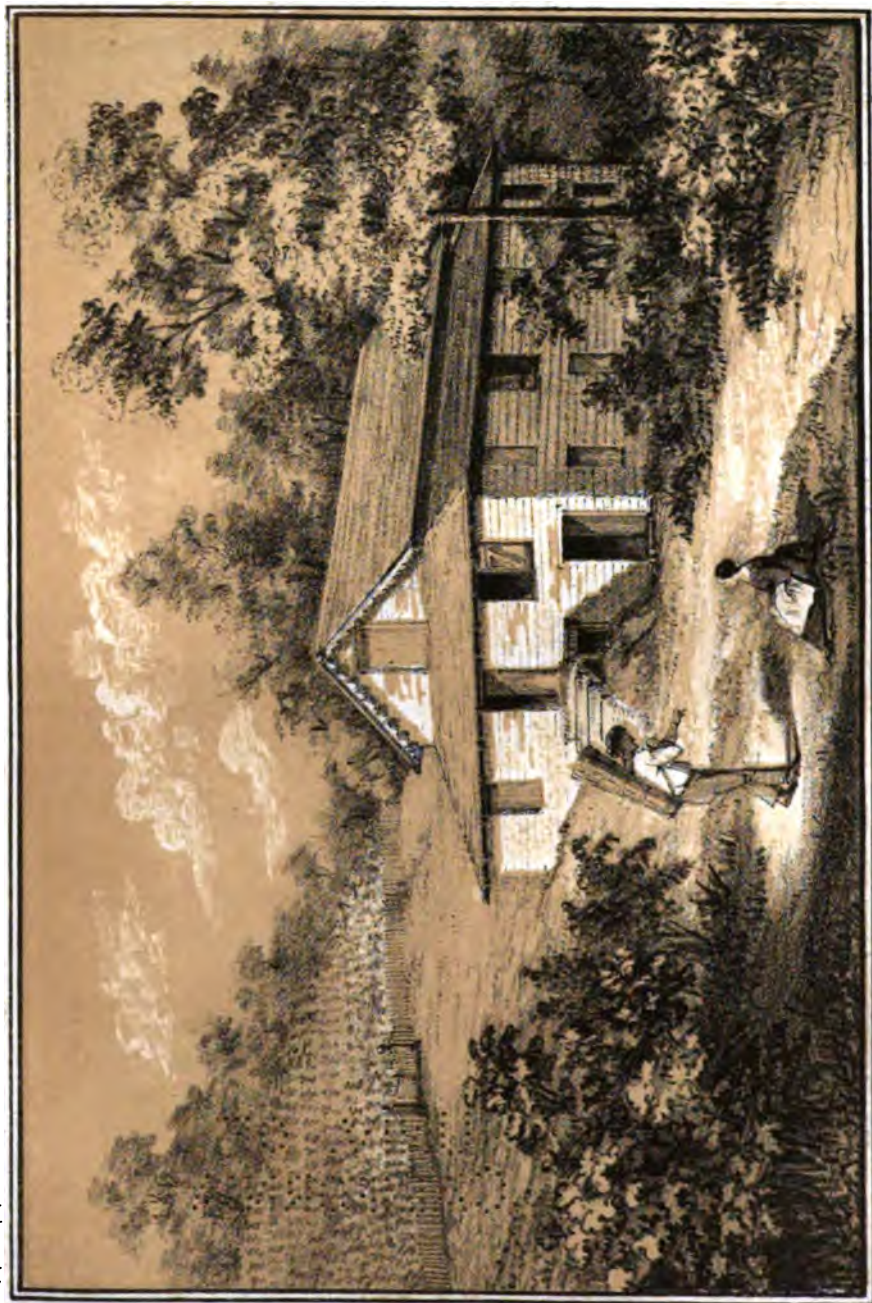
A TREATISE ON THE GRAPE VINE IN VINEYARDS IN THE VICINITY OF CINCINNATI, By a member of the Cincinnati Horticultural Society, 48 pages. Sold by J. F. Desilver, Main street, and D. McAvoy.

THIS work, though a small volume, is one of very great importance to the people of this neighborhood and to all other parts of the country to which the culture of the vine is adapted. Indeed it merits a much more extended notice than can be bestowed upon it in the present number of the Review.

From these pages, which treat in detail of the cultivation, pruning and management of the vines, and to some extent, of the manufacture and fermentation of the wine, any one of common ability, will be enabled at once to commence the business with an infinitely better prospect of success, than even the European vinedressers could do a few years ago, when all were alike ignorant of the peculiarities of our soil and climate, and their adaptation to the Catawba or other grapes and of the treatment best suited to them.

The readers of the Review are referred to the book for particulars.

Univ. of
California



Drawn on Stone by H. P. Gengembre.

VIEW OF WINE HOUSE OF M^r. CORNEAU & SON
LATONIA, NEAR CINCINNATI, O.



VOL. I.

NOVEMBER, 1850.

No. 2.

EDITORIAL TALK.

The Fairs. The Vintage. The Diana Grape. Pomological Congress.

THE recent Fairs, Horticultural, Agricultural and Mechanical, have made a glorious era in the history of our State and City. The effects of such an ingathering of the people, to witness the collected results of their own and neighbors' industry and genius, and the enlarged views produced upon the minds of all, may be imagined; but few will be able, even in their imaginations, to realize the effects of the exciting causes which have been brought to bear in this way upon the great mass. Time alone will show the result. It is like a great school to most men—being an occasion upon which new ideas or more liberal views are received—and the mind thereby improved, the heart expanded.

There is a new era for our State in this department of progress. The recent State Fair is but the beginning—and the officers of the State Board of Agriculture will no doubt have every thing much better managed another year—as it was, by dint of great efforts, and the invaluable aid of MESSRS. PETERS and ALLEYN, from the State of New York, where they had participated in similar exhibitions for several years, our State Fair gave great satisfaction to most of those who attended it—and

we trust that those who were unfortunately dissatisfied, will make sufficient allowance for the want of practice in those who had the control of the business. Another unavoidable difficulty arose from the want of practice in the committees: a beautiful system is provided for their reports, but it was not always understood, and in the extreme confusion incident to such an immense concourse of people, it was not always possible to conduct a critical examination of the articles entered for exhibition.

A minute description of this Fair would not be appropriate for a Horticultural paper, but a few words in our own department may not be amiss, especially, since the merits of Horticulture begin to be so highly appreciated by the Agriculturists of our State, that Horticultural Societies are likely hereafter to have a representation in the body of delegates who select the members of the State Board of Agriculture.

The Floral Hall was a large tent, ornamented with evergreens, and decorated with green house plants, floral designs, and displays of flowers—some of which were from the most distant parts of the State. Mr.

MoINTOSH, one of the largest contributors of roses, phloxes and dahlias, etc., was from Cleveland—and he carried off some of the premiums too. The display of fruits was large, and occupied the tables around the entire circuit of the immense tent. The apples, especially, were in great profusion, and from many distant points. Among them all, however, none were more admired than those of F. G. CAREY, of this county, well known as the Principal of Farmer's College, and equally well known as the contributor of fine fruits at our Horticultural Hall.

Grapes were very abundant, both those from open culture in the vineyards, and also from glass vineries. JOHN E. MOTTIER was a liberal contributor of the former, having piles of grapes on his tables; many visitors from this part of the State were astonished to see such fine well-ripened specimens, as those brought by Mr. CARPENTER from Kelly's Island, in the extreme north, where it had been supposed the climate was too inhospitable for vine culture. If Mr. CARPENTER's experiments continue to succeed as well as they promise, this island will become an important region for fruit. A few years ago, when taking refuge under the lee of its forests, during a storm on Lake Erie, the passengers went ashore, and we were satisfied with a few black raspberries—the only fruit product then to be found on the island.

The postponement of the Fairs has had one great advantage to our friends from other parts of the country—inasmuch as it has afforded them an opportunity to visit our vine clad hills—which, if not so poetical as those of France and Italy, are vastly more interesting to us, being nearer and within our reach. Some sober people think there is more poetry than truth in this idea of *vine clad hills* being so beautiful. The truth of the proposition may indeed be questioned for the bare stakes, entwined with embrowned or leafless

vines, at the time of the vintage, and especially after the harvest of the grapes, are not very beautiful, either in the distant landscape or near at hand—while all must admit that there is a great deal of very acceptable and real pleasure in being allowed to wander through a well furnished vineyard at this season, where the purple berries hang in tempting profusion.

The vintage has been in full and successful progress during the present month, and as was predicted by a correspondent in the first number of the Review, the produce will be large, though the quality of the wine, in some vineyards, is not equal to the high standard which has been assumed as that requisite for the manufacture of the best wine. Those who have experimented most largely, think that the *must* should weigh 85° to 90° of the saccharometer—and some of the grape juice this year will not come up to that standard. There are, however, exceptions; and the public may congratulate themselves upon the prospect that we shall have some wine this year that bids fair to equal any previous crop—at least the appearance of the grapes indicates such a result—they have ripened much better than any one could have imagined, who had only seen them a month ago. This is the case in the best vineyards, especially those on the high grounds.

Having visited several of the wine-making establishments, some of the observations made therein, may prove interesting to the readers of the Western Horticultural Review. Since intelligent men have taken the business in hand, and a good pamphlet has been presented to the public, to diffuse knowledge upon this important branch of industry, many valuable improvements have been made in some of the operations—and wine making is no longer the slovenly process so frequently complained of in former years. The value of cleanliness and care is now more universally acknowledged,

and the price of the product being graduated by the quality, a powerful lever is thus applied, stimulating all to greater neatness.

One plan, supposed to be a great improvement, is that of separating the stems from the grapes before they are placed upon the press, as they are supposed to give an austere and bitter taste to the wine, and prevent the severe pressing of the cheese. This process has been previously used by Mr. CORNEAU at his excellent establishment on Bank Lick, in Kentucky, near Latonia Springs; a locality which appears admirably adapted to the culture of the grape, as has been already proved to some extent by numerous thriving vineyards—among which are those of Messrs. JONES, MOSHER, PARK, CORNEAU, etc. The last named gentleman, whose father is an old vigneron from France, where he was familiar with the business from childhood, has introduced an apparatus for separating the stems and crushing the grapes; it is exceedingly simple and appears to succeed very well. His wine of last year's vintage is very good, and devoid of any austere taste of the stems.

Mr. R. BUCHANAN, of Clifton, whose beautiful vineyard has been so universally admired by all visitors, and whose wine is so excellent, has also introduced an apparatus for separating the stems from the mashed grapes, which is remarkable for its simplicity, being nothing more than a large sieve with meshes about three-fourths of an inch aperture. The grapes are passed through this after being mashed, and thus separated from the stems. The whole arrangement of Mr. B's wine cellar is good, as his press is very compact, and in the cellar of his dwelling.

The location, however, of the presses at the vineyard of Mr. S. RINZ, of Delhi township, is preferred by many—though not so compact, they are more convenient, being placed in an out-house upon the level of the ground, they are more readily approached—and the juice

is conducted by gravity to the casks in the deep cellar under the residence adjoining, and thus there is no necessity for lifting a pailfull of the juice. Mr. R. prefers two presses, that he may extract all the must without being hurried. His "cheese" of mashed grapes is placed upon a strong frame of slats raised above the floor of the press—and the sides are made of slats bored full of holes, so that the juice is allowed to escape in every direction: this he thinks a great advantage. His crop of grapes is very large and fine. Mr. R. thinks he will make four thousand gallons from about five acres.

Mr. T. YEATMAN's vineyard and wine house form an attractive point to strangers, not only on account of the easy approach by the river road, but because of the extent of ground occupied, the handsome crop, the conveniences of the wine house and cellars, and, especially, the urbanity of the employes, who appear to take pleasure in affording information to those who seek it. Mr. YEATMAN also uses the sieve to separate the stems from the mashed grapes, before he puts the pulp into press.

A few days since, I enjoyed another opportunity of tasting "the new and celebrated" DIANA GRAPE, under very different circumstances, however, from those which attended my first acquaintance with it and its happy proprietor upon the bleak Atlantic coast, where our coy Southern vine refuses to yield her luscious berries. At Mr. HOVER's nurseries, last November, I saw the Catawba and Diana, side by side—the one green, shriveled, and not fit to eat, the other plump, juicy, and of pleasant flavor, especially to one who had not tasted a bunch of our own good Catawba grapes for five or six weeks. Now, the tables are turned; the Catawba is plucked fresh from the vine, smiling amid its delicate bloom, and its thin skin almost bursting with the luscious, sugary juice, and we compare it with the Goddess Diana, weary and travel soiled from her thou-

sand miles' voyage, plucked perhaps before quite ripe, so as to bear the journey better—effete from long and close confinement, and all the bloom exchanged for a soiled surface. Still, however much disposed to favor a new fruit, especially one so highly recommended, and anxious to apologize for its bad looks, I am compelled to render my judgment of condemnation in common with that of forty others, gentlemen of observation and practical tasters, all of whom, like myself, were asked by Mr. LONGWORTH to try *some grapes*, without any clue being given as to the kinds—until after the verdict was rendered by each—no one knew that there was a Diana grape in the City.

Without a dissenting voice, the new grape was declared to be inferior to the unripe Catawba purposely selected for comparison, especially on account of its thick skin, sour and solid pulp, and deficient aroma. With regard to the flavor, that is at best, but a matter of *taste* so long as we are considering a *table* grape, though the aroma and the amount of saccharine principle are very important to us in the manufacture of wine. It may be suggested that some change might have been effected by the transportation of these grapes, and I have stated their condition fairly. It is also true that the flavor of the Diana was not acceptable to the majority of the party, and decidedly unpalatable to some. Mr. L. has some fine shoots of this year's growth, from the original vine of Mrs. CRENORE, which will, we hope, enable us to test it under more favorable circumstances another year. In the mean time we advise our friends not to purchase too largely—or to purchase Catawba, which has already been proved, and of which they can procure one thousand roots, instead of one, for their five dollar bill—at least Catawbas one year old have been sold at the rate of half a cent a piece in this market—though that is below the usual price.

The Diana grape, Mr. FRENCH writes, was shown before the Massachusetts Horticultural Society sixteen years ago. How happens it that its merits have never before been discovered, so as to render it worth five dollars a plant? It will prove an invaluable acquisition to the inhabitants of a colder region, where our favorite Catawba will not ripen, and where, of course, the Diana may be highly prized. We shall probably have to raise many more seedlings and shall naturalize many more wildings, before our committees will award that \$100 premium for a grape better suited to our climate, than the one which now has a representation of two or three millions bearing upon all our hills—the *Catawba*.

"Great is Diana of the Bostonians" may be sung, but, "greater is Catawba for the Cincinnatians," is and will be sung here, more loudly.

The Pomological Congress held its last meeting here during the State Agricultural Fair, and was composed of a highly respectable body of men from most of the States heretofore represented in the previous national assemblages of Pomologists. Much to our regret, however, there were no delegates from New England, where so many eminent cultivators and excellent connoisseurs reside!—Why was this so? Large delegations were appointed from their various horticultural and other institutions, and the West would have been most happy to have welcomed them all. The committee on the introduction of fruits, though composed of Eastern and Northern men, set out with the determination to notice western fruits especially—several were taken up and discussed, but many, very many more were unavoidably passed by and laid over for another occasion. Many valuable reports were handed in, which will be collated and published with the proceedings. At the earnest request of many members of the Congress, the pages of the Western Horticultural

Review will be open for the publication, in detached portions, of the important and highly interesting transactions, which it is hoped will soon be prepared by the Secretary.

The present number of the Review is unavoidably taken up with the transactions and reports of the Cincinnati Horticultural Soci-

ety, to the exclusion of most other matter. There are some highly important communications laid over for the next or December issue. This course has been adopted in the belief that these transactions will be as acceptable as any other matter, and that, if published at all, they should be entire.

TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY :

AT THE AUTUMNAL EXHIBITION, OCTOBER 2, 3, 4, AND 5, 1850.

THE members of our society may congratulate themselves upon the achievement they have recently accomplished. Notwithstanding the postponement, which greatly deranged the calculations of those who had been preparing for the fall show, and could not fail to operate prejudicially in many ways—still our members may well feel proud of having made the most brilliant display that has ever been presented to our garden-loving community. Let them always endeavor to emulate the recent exhibition in their future efforts, and, while such a zealous spirit continues to animate them, if plants will grow, flowers expand, and fruits mature, the people of Cincinnati will continue to be delighted with fine displays of Flora's and Pomona's offerings.

The fruits were the chief attraction to many of our visitors from a distance—especially the apples—and they were deservedly very much admired, for their size and appearance; many of the Eastern pomologists said they could not recognize their old acquaintances, so much improved by transplantation into our fertile soil.

Beside our own immediate neighbors, we had some contributors from a distance, who added much interest to this department by their tables—among those, the following may be mentioned: Messrs. J. Orr, of Laporte, Ia., H. Avery of Iowa, Barry of Rochester, and L. Sanders of Grass Hills, Carroll county, Ky.

The latter has been a successful cultivator of fruit in Kentucky for half a century, during which time he has planted orchards in different parts of the State, exercising very good judgment in the selection of his varieties; among them we find the Bohanon, a delicious autumn apple, already described and noticed by our society in some of the earlier transactions, (see Annual Report, for 1848, p. 13). The Fall Queen, known also as the Horse apple, deserves attention as a pleasant table fruit for October.

Two of the greatest favorites in Kentucky, are the Pryor's red, and the Rawle's Janet, neither of which appears to be known in the eastern states. Of these varieties Mr. Sanders speaks in the highest terms in the full descriptive list which accompanied the specimens, a paper by the by, which does great credit to the intelligence, discrimination and industry of this devoted pomologist. Of the Bohanon, he says—"from Virginia; tree straight, with a roundish, handsome head—fruit above medium size, *very early*, may be picked for cooking in June, eatable in July—in perfection during August—flesh yellowish, tender, flavor rich and aromatic; skin smooth, of a beautiful yellow when ripe, with a tinge of red." Of the Rawle's Janet he further remarks, "I consider this apple possessed of greater value than any other for the soil and climate of Kentucky, in the first place it is

of healthy and sound growth, with strong wood:—As it blossoms two weeks later than most other sorts, it is a sure and plentiful bearer; the fruit hangs on until it suits your convenience to gather it. It is a firm, yet juicy, crisp, and highly flavored apple; I have kept them sound until June of the next year. I have known this apple for fifty years, since it was introduced to my notice at John Lightfoot's nursery, in Woodford, now Anderson county, Ky. Thirty to forty per cent. of every orchard in Kentucky should be planted with this variety."

The specimens from Laporte, Indiana, and those from Iowa, were very beautiful and well assorted—from the latter region especially, our community were not prepared to see such a display as that from Mr. Avery. The Northern spy from Jas. H. Watts, Rochester, N. Y., afforded us a fine opportunity of examining this famous New York apple, which, is beautiful, an excellent keeper and highly aromatic, though its other properties remain still to be tested in this climate before it can receive our unqualified commendation. The large collection of Messrs Ellwanger & Barry, was very interesting, as it embraced so many sorts which are new to us.

PEARS.—The supplies of this luscious fruit have never been so abundant as at this exhibition, notwithstanding its lateness in the season—when so many of our autumn varieties had disappeared; there would however have been a much more brilliant display had the fair been held two or three weeks earlier. The very extensive assortment of eighty-five kinds from Ellwanger & Barry, was an object of great interest to the lovers of this fine fruit, these and the contributions of M. P. Wilder, C. Hovey, A. Saul, Jas Dougall, and others, received through the Pomological Congress, will afford our committee on opportunity to test many sorts, now only known by their printed characters, too often, unfor-

tunately, so highly laudatory, that cultivators are induced to purchase trees, in the fruits of which they are destined to be disappointed after many years of anxious expectation.

PEACHES had passed by before the Fair, still there were some sorts exhibited, among them the Heath cling appeared to the best advantage. Those from Kentucky, were, as usual, the best, from Mr. Sanders very good, but the specimens of Heath, and Grand Admirable, from L. Young, of Louisville, Ky., were magnificent beyond compare—they are both clingstones, of great size and beauty. D. McAvoy was the chief contributor from this region, where the crop has been so fine this season, that we might have had a very handsome display almost any week in August or September, and indeed it is well known that every Saturday meeting has been well attended by liberal contributors with their extensive assortments of this delicious fruit.

VEGETABLES.—The tables of vegetables literally groaned beneath the weight of matter crowded upon them; and, the admirable appearance of these contributions, reflect great credit upon the gardeners who produced them. The beets were enormous; the tomatoes extraordinary, squashes and pumpkins in greatest quantity and of every variety; celery, okra, turnips, cabbages and corn of different kinds, added to the rich appearance of this department. True sugar corn, just in perfection for the table, was quite tempting to those who believe it is the only sort fit for boiling—this was planted on the 17th of July, on Rye stubble, and is said to be a profitable crop, but of course a rather uncertain one in localities subject to early frosts.

DAHLIAS, the gorgeous queens of autumn, continue to attract great attention from our florists, and new faces appear upon the show stand from year to year. Mr. John Sayers was the successful competitor this season for many of the premiums. The little sons of

S. S. Jackson produced a very fine seedling, to which a prize was justly awarded, and it was named in honor of their mother, a pretty tribute from these juvenile gardeners.

Roses were in good variety—both cut flowers and pot plants. The beautiful Bourbons and Remontants continue to gain upon the affections of our florists, both professional and amateur.

Designs of more striking and interesting character than usual, added much to the embellishment of the great hall. This kind of work does not always receive the credit it really merits. Good designs cost a considerable outlay of money, a great many flowers are used, and an immense amount of time and labor must be occupied in their construction.

Delegates from other Societies.

We were exceedingly gratified by the attendance of Delegates from other Societies. They were here in considerable numbers; but, owing to the confusion incident upon such an occasion, we have not been able to obtain a perfect list of their names; indeed they did not all report themselves to the proper officer. The following list is not complete, but we publish it, hoping that those who do not find their names in it, will do us the favor to announce the fact to the Corresponding Secretary, G. Graham, so that we may be able to make a record of the compliment they have paid us by their presence.

Dr. W. Brincklé, of Philadelphia, was the only Delegate from the Pennsylvania Society.

Thomas Harvey, from Chester county, Pennsylvania.

John Murdock, Pittsburgh, Pa.

L. S. Stow, Milan, Erie county, Pa.

Edward Tatnall, from Wilmington, Del.

Newburgh, N. Y.

Chas Downing, A. Saul.

P. Barry, Rochester, N. Y.

Wesley Rozzell, Newtown, Schenectady county, N. Y.

Buffalo, N. Y.

The Delegates from the Buffalo Horticultural Society, appeared very much pleased, and left the following testimonial:

BURNET HOUSE, Oct. 5. 1850.

To A. H. ERNST, *Pres. Cincinnati Horticultural Society*:

DEAR SIR,—The undersigned, Delegates from the Buffalo Horticultural Society, beg to tender their warm regards for the kind and hospitable reception received at your hands, and especially would they acknowledge the personal kindness of the Messrs. Resor, N. Longworth, J. A. Warder and M. Kelly, in the opportunities presented of visiting many of the nurseries and beautiful places in and about your city.

The Delegates also beg leave to express their highest admiration for the elegant display of fruits, flowers, and green-house plants, now on exhibition, as presenting high evidence of the skill and good taste of your members.

W. R. Coppock,	J. Eaton,
B. Hodge,	L. F. Allen,
Joseph Dart,	A. McArthur,
L. Hodges,	G. B. Webster,
H. B. Potter,	N. Wilgus.

T. B. Claiborne, Natchez, Miss.

Messrs. Sigerson, St. Louis,

Henry Avery, Burlington, Iowa.

Dr. J. Kinnicott, Northfield, Ill.

Jas. M. Tomlinson, Indianapolis.

Gov. Wright, Ia.

E. J. Colerick, Fort Wayne, Ia.

Joseph Orr, Laporte, Ia.

Louisville, Ky.

Edward Wilson,	Lawrence Young,
James Orr,	Ormsby Hite,
H. P. Byram,	Arthur Peter.

Lewis Sanders, Carroll county Ky.

J. H. Robinaon, Georgetown, Ky.

Columbus, O.

Dr. F. Carter,	Eli Gwynne,
M. Bateham,	Mr. Olmsted,
	Mr. and Mrs. Andrews,

Chas. Carpenter, Kelley's Island.

Urbana, O.

Jno. H. James, Thos. Gwynne & Wife,
Dr. Wm. Murdock.

A. McIntosh from Cleveland, Ohio.

J. R. Miller, Enon, Clark county, O.

James Edgerton, Belmont county, O.

Benj. F. Ponda, Troy, Miami county, O.

T. H. Barret, Zanesville O.

J. T. Warder, Springfield, Clark, Co., O.

F. J. Scott, Toledo, O.

REPORT OF THE FRUIT COMMITTEE.

It is seldom that your Committee are disposed to complain, but the labor of the recent investigations which devolved upon them in examining the profusion of fruits exhibited, has almost forced them to cry out, "save us from our friends."

The evidence is to be found in the accompanying lists of fruit, all of which were minutely inspected, and the awards rendered to the best of our ability. One great difficulty under which we have labored was the want of sufficient time for the deliberate examination of the specimens, but it was necessary, after a general inspection, to bestow most of our efforts upon those parcels which appeared to come most nearly upon an equality of merit.

The investigation of individual merit of various kinds, has occupied much of the time of the committee since the exhibition, and must continue to require much careful observation, of the many specimens still on hand for examination. We can not too strongly express our regret that no remedy has yet been proposed for the false labeling, which is so frequently to be observed, and which was so freely commented upon by our visitors.—We hope it may be provided, before another fair, that a special committee be appointed to remove the cards which are manifestly wrong, or at least to mark them with a (?) when there is any doubt as to their correctness.

Pears.

From J. B. SCHROEDER, Clifton. 3 varieties not named, one of which is supposed to be Duchesse d'Angoulême.

From Dr. MOSHER. Passe Colmar.

From JOHN R. JACKSON. Walnut, Brown Winter, Rushmore's Bon Crétien.

From M. S. WADE, some fine specimens. Beurré de Capiaumont, Bartlett, Ananas d'Été, White Doyenné, beautiful, Beurré d'Arenberg, and one unknown.

From ROBERT NEALE, a very choice collection, embracing, Orange vert, Maria Louisa? Beurré Capiaumont, Winter Nelis, Louis Philippe? Beurré Diel, Chaumontelle, Glout Morceau, Louise Bonne de Jersey, Wilkinson, Urbaniste, Belmont, Gansel's bergamot, Shobdencourt, Surpasse virgalieu, 2 varieties unknown.

From HENRY AVERY, Burlington, Iowa. 3 Bell pears of very large size.

From T. V. PETICOLAS, a handsome collection, embracing, Beurré Capiaumont, Maria Louisa?—Virgalouse?—which resembles the Butter pear, Beurré spence? Easter Beurré, Glout morceau, Sugar pear, Clion, Bon chrétien fondante, Frederick of Wirtemberg, Beurré d'Arenberg, Fall butter, Autumn superb, Colmar, Doyenné gris, Beurré diel, Unknown, Passe colmar, Orange vert, Belmont, Napoleon, Unknown.

From W. HEAVER. Napoleon.

From WM. ORANGE. 2 varieties, names not given.

From SAMUEL PEEL, Cincinnati, O. Duchesse d'Angoulême—blossomed in June—Fameuse? Bergamot.

From M. McWILLIAMS. An ornamental Epargne covered with moss and decorated with beautiful specimens of the following:—Flemish beauty, Bartlett, Seckel, Butter, Napoleon, Virgalieu, Winter sugar, Stone, Passe colmar.

From L. YOUNG, Louisville, Ky. A plate of Seckel pears, of unusual beauty and size, which attracted great praise.

From WM. RESOR. 10 varieties, names not given.

From A. H. ERNST, as usual, a large assortment. Seckel, Unknown, Louis Bonne de Jersey, Lawrence, Beurré Langlier, Onondaga, Napoleon, Beurré Capiaumont, Adèle de St. Denis, Passe colmar, Easter Beurré, Duchesse d'Angoulême, Anderson's favorite,

Beurré Preble, Scienville, Fortune, and Jaminette.

From JOSEPH ORR, of Laporte, Indiana. Cushing, Passe Colmar, Easter Beurré, Millionus Favorite, Crassanne Bergamot, Beurré Diel, Fré'k of Wirtemberg, Louise Bonne de Jersey, Maria Louisa, Golden Beurré of Bilboa, White Doyenné, Vicar of Winkfield, Bezi de la Motte, Beurré Bosc, Flemish Beauty, and two unknown.

From ELLWANGER & BARRY, Rochester, N. Y. De Louvain, Doyenné Rose, Duchesse d'Orleans, White Doyenné, Bezi de Montigny, Napoleon, Bergamot, Beurré d'Hiver Nouveau, Angleterre Noisette, Louise Bonne de Jersey, Oswego Beurré, Figue, Verte Longue, Paul Ambré, Vicar of Winkfield, Seckel, Duchess de Mara, Gansel's Bergamot, Doyenné Scienville, Fontarabie, Belle Audibert, DeCannaise, Spanish Bon Chrétien, Autumn Bergamot, Martin Sire, Mellville d'Hiver, Benoist, Seedling from Rochester, B. Moire, Chaumontelle, Fortune, Delices de Jodoigne, Beurré Beurréal, Beurré Capiaumont, Doyenné d'Hiver d'Alencon, Bergamot d'Alama, Angélique de Rome, Glout Morceau, Doyenné Goubault, St Germaine, De Bavay, Paure Aural, Washington, Gratioli, Doyenné Robin, Orange d'Hiver, Duchesse d'Angoulême, Glory of Cambrone, Catinka, Ritelle, Reine d'Hiver, Colmar Von Mons, Winter Bell, Doyenné Panaché, Figue Verte, Cuvilier, Tarquin, Beurré d'Hardenpont, Bezi vaet, Beurré Diel, Louisa d'Prusse, Chelmsford, Messire Jean, Soldat Laboureur Belgique, De Louvain, Davi, Colmar Musque, Prince's St. Germain, Brown Beurré, Mansuette, Rouselet d'Rheims, Colmar Charny, Bezi d'Caissay, Colmar d'Hardenpont, Delices de Mons, Epine Dumas, Easter Beurré, Chaptal, and four varieties without labels.

The foregoing list, was of a splendid collection of pears, the most extensive ever spread upon our tables. The names of many of them are so new that we can find them in none of our catalogues, not even in that of Mr. Barry himself. The specimens were given to our president, who will no doubt examine them critically, and we hope to have an interesting report from him upon their merits.

From Mr. VERPLANCK, very fine specimens of Flemish Beauty, and a goodly number of three kinds said to be seedlings; rather above medium size, obconical, of a peculiar green color, slightly russeted. The flesh white, very juicy and melting, sweet and delicious though not very highly flavored, they possess, however, a very delicate aroma. When too ripe they become dry and almost mealy; one of the committee fancied he could recollect the taste of these pears, but could not identify them. They came here as different seedlings, but bear so strong a family resemblance in every feature, that they might have been supposed to have been produced by the same trees, or by trees grafted.

Sheldon? Pear.—Extract from a letter accompanying the specimens sent to the Pomological Congress, and transferred by Dr. J. A. Kinnicott to the Cincinnati Horticultural Society:

"Forty years ago a Mr. Sheldon moved from the western part of Connecticut, and brought with him some pear seed from the garden of Judge Johnson, of the town of Washington, Dutchess county, New York, and planted the seed in the town of Huron, Wayne county. They raised about two hundred pear trees. Five of them produce fruit very similar in size, shape, appearance, and flavor. I send you pears from two of those trees, and also from a young tree, an offshoot of the tree bearing fruit marked No. 2. They are not as large as they were last year, nor are any of our pears. Nor have any of them that I have tasted, the richness or flavor of previous years.

Said pears have several names, viz.: Sheldon Pear, Black Virgalieu, the Whipple Pear. The tree resembles the Virgalieu in its growth.

I am yours, truly,
W. G. VERPLANCK."

Quinces.

From R. BUCHANAN. Orange, Pear, Lemon.

From ROBT. NEALE. Orange, very fine; Portugal.

From WM. ORANGE. Green, Orange.

From F. B. WILLIAMS. Pear, Apple.

From FLAMEN BALL. Apple.

From M. McWILLIAMS. 3 varieties not named.

From J. C. FERRIS. Orange and Portugal, very fine.

From S. M. CARTER. 2 varieties, 1 plate of each.

From M. Wm. RESOR. 2 varieties, names not given, one of which is the true pear shape and very large.

From Mrs. Dr. MUSSEY. 1 lot.

From A. H. ERNST. Portugal, Pear.

From CHARLES CIST. Orange Quince, 1 large basket full, very fine.

Peaches.

From L. YOUNG, Louisville, Ky. Heath Cling, splendid; Grand Admirable Cling, magnificent.

From Dr. KEMPER, Maysville, Ky. A Seedling Freestone of handsome shape, said to have great merit, the specimens being out of season were preserved in alcohol. Fresh fruit promised next year.

From Mr. BENTLEY, Charleston, Indiana. Two varieties—seedlings.

S. M. CARTER presented quite a number, some of which he had kept in cans, but they were not in good condition, viz:

Heath Cling, five plates; Lemon Cling, three plates; Red cheek Melacoon, three plates; Blood Free, one plate; Kenrick's Heath, one plate; Willow leaf, one plate; Early Crawford, 2 plates; 3 varieties, unknown.

Mrs. C. J. BANKS. Two plates of Smock free, from Mr. J. C. DAVIS.

GABRIEL SLEATH. Three varieties, names not reported; very fine.

From Dr. CHAPMAN. A Seedling.

From Mr. PINKHAM. A Seedling fine.

Grapes.

From Mr. NATHAN HASTINGS. Catawba, Cape, and Isabella. Of the latter there were several branches, showing the bearing properties with this cultivator, always so successful.

From ROBERT BUCHANAN. Plates of Catawba, Isabella, Cape, Mammoth Catawba, White Catawba, Hybrid Catawba, Lenoir, Venango.

From M. S. WADE. Plates of Catawba, Isabella, Fox, Schuylkill Muscadell, Ohio, and one basket Grapes, assorted.

From R. SHOEMAKER. Baskets of Catawba and Isabella, both fine.

From ROBT. NEALE. Plates of Catawba, Isabella, Ohio.

From SAML. PEEL. Cigar box.

From JNO. WILLIAMSON, New Richmond, Clermont county, O. Twenty-five bunches of fine Catawba Grapes, from a vineyard of seven acres.

From J. C. FERRIS. Isabella, Cape.

From SEBASTIAN RINZ, Delhi Township, Lenoir, Catawba, Guignard, very fine bunches of each.

From Wm. RESOR. Five bunches Black Hamburg, very fine; weight 2 lb. 10 oz., 1 lb. 12 oz., 1 lb. 8 oz., 1 lb. 6 oz., 1 lb. 6 oz.

From Mrs. Dr. MUSSEY. Cape, Isabella, Catawba.

From GABRIEL SLEATH. Catawba, Cigar Box, or Ohio.

From JNO. E. MOTTIER. Catawba, Mammoth Catawba, Cape, Herbemont, Isabella, Missouri, Mottier's White Seedling, Mottier's Red Seedling.

From N. LONGWORTH. *Foreign*—Black Frontignan, White Nice, White Syrian, 2 lb. 11 oz., Royal Violet Muscadine?—*Native*—Herbemont, Lenoir, Ohio, Missouri, Elsinboro, Arkansas, Catawba.

From R. B. BOWLER. The most extensive assortment of foreign kinds; the list not given in; fruit not in good condition.

From S. M. CARTER. Three plates Catawba.

From Dr. CHAPMAN. Eight sorts.

Apples.

From R. G. BUCKNER, Covington, Ky. No list of names or number of varieties handed in.

From J. B. SCHROEDER, Clifton, Hamilton county, O. 5 varieties—names not given.

From Dr. S. MOSHER, Latonian Springs, Kenton county, Ky.—a very choice selection. Green Newtown Pippin, Yellow Newtown Pippin, Rambo—the fairest and largest ever exhibited, Yellow Belleflower, Cumberland Spice, Golden Pippin, Rawle's Janet, Smith's Cider, Sapson and Hawthorndean.

From Dr. A. WHIPPLE, Locust Grove Farm, Hamilton county, Ohio,—a beautiful assortment. Yellow Belleflower, Brabant Belleflower, White Belleflower, Golden Russet, Rawle's Janet, Virginia Greening, R.

I. Greening, Priestly, Pennock, Newtown Pippin, Vandervere Pippin, Pound Pippin, Wine Sap, Hewes' Crab, Harrison, Campfield, Red Streak, Dewitt or Doctor, Father Abraham, Milam, Wine Apple, Pryor's Red, 5 varieties of Seedlings.

From J. W. GILBERT, Westland Farm, Sycamore township, Hamilton county—fine specimens indicating a healthy young orchard. Yellow Belleflower, White Belleflower, Green Newtown Pippin, Yellow Newtown Pippin, Vandervere Pippin, Dutch Vandervere, *Æsopus Spitzenberg*, Kaighn's *Spitzenberg*, White Pippin, Winter Pippin, Ortley Pippin—which is the same as white Belleflower, Red Baldwin, Hubbardston Nonsuch, Golden Russet, Roxbury Russet, R. I. Greening, Wine Sap, Lansingburg, Broadwell Apple, 1 unknown.

From JOHN R. JACKSON, Green township, Hamilton county. Fall Pippin, Newtown Pippin, Vandervere Pippin, Putnam Russet, Golden Russet, Russetting, Vandervere, Lancaster, *Spitzenberg*, White Belleflower, Rambo, Black, Winter Pearmain, Summer Pearmain, Romanite, Pennock, Red Streak, Red Doctor, Striped Doctor, Hewes' Crab, R. I. Greening, Green Seek-no-further.

From JOSEPH MARTIN, of Clermont county, per R. NEALE. 1 fine variety of Autumn Apple, a name for which the Committee have not been able to furnish—size above medium, slightly conical, very pleasant flavor, flesh yellow, skin white, smooth; good.

From ROBERT BUCHANAN, Clifton, Hamilton county,—a numerous list from his young orchard; some kinds were single specimens; but the whole made a large display. Willow Leaf, Golden Russet, Putnam Russet, Gravestein? not correct, Dutch Vandervere, Romanite, Pennock, Rawle's Janet, Harrison, Michael Henry Pippin, Golden or Fall Pippin, White Pippin, Blenheim Pippin, Yellow Newtown Pippin, Gatch, Belmont or Gate, R. I. Greening, Virginia Greening, Porter, Grafton Winter Sweeting, Ernst's Sweeting, Chandler, Fox's New Belleflower, Cathed, Sheepnose, Canfield, Red Belleflower, White Belleflower, Yellow Belleflower, Ashland, Delight, Wine Apple, Wine Sap, Pryor's Red, Maiden's Blush, Vandervere Pippin, French Everlasting, White Pearmain, Rambo, Monstrous

Pippin, Lady Apple, Red Siberian Crab, Yellow Siberian Crab, and 10 kinds unknown.

From R. SHOEMAKER, Mill Creek township, Hamilton county, O. 4 unknown varieties, but very handsome.

From M. S. WADE, Beech Grove, Millcreek township, Hamilton county,—a very handsome display, with fine specimens, remarkable for their appearance, and some of them unique. Emperor Alexander, Yellow Ingestrie, Red Ingestrie? Stroat, Fall Pippin, Holland Pippin, Michael Henry Pippin, Newtown Pippin, English Golden Pippin, Bullitt Pippin, Ribston Pippin, Green Pippin, Jonathan, Ladies' Sweeting, Lady Apple, *Æsopus Spitzenberg*, Dutch Vandervere, Rambo, Surprise, Lyscom, Victuals and Drink, Black Gilliflower, Red Gilliflower, Honey Sweeting, Boston Russet, Golden Harvey, Sops of Wine, Porter, Little Black Apple, Swaar, 1 unknown.

From ROBERT KYLE, Clermont county, O., per R. NEALE. 7 varieties, names not given, and some unknown to the Committee—very fine.

From JOHN HELTMAN, Clermont county, O., per R. NEALE. 4 varieties, one of which is a seedling of fine flavor, and much admired by all.

From DR. LOUIS DESHIELDS, Mt. Harrison, Hamilton county, O. 24 varieties, names not given.

From ROBERT NEALE, Mt. Carmel, Clermont county, O.—an extensive and very well selected collection. Newtown Pippin, Fall Pippin, Michael Henry Pippin, Vandervere Pippin, American Pippin, Baldwin, R. I. Greening, Newtown *Spitzenberg*, Dutch Vandervere, Kaighn's *Spitzenberg*, Yellow Belleflower, White Belleflower, Brabant Belleflower, Wine Sap, Rawle's Janet, Milam, Boston Russet, Golden Russet, Pearmain Russet, Pumpkin Russet, Lyman's Pumpkin Sweet, Fallawater, Seek-no-further, Green Seek-no-further, Danvers' Winter Sweet, Porter, Peck's Pleasant? White Winter Pearmain, Reinette Canada, White Pippin, Maiden's Blush, Lady's Blush, Man's Belleflower, Romanite, Lansingburg, Terry's Red Streak—probably Rambo, Pennock, Lady Apple, Yellow Ingestrie, Gloria Mundi, Chandler, Calville Red Winter, Stroat, Rambo, Black Apple, Tolman's Sweeting, Willow Leaf, and one unknown.

From MR. BENTLEY, Charleston, Ia. 1 variety, name not given, large and handsome, supposed by the Committee to be a seedling.

From MR. HENRY AVERY, Burlington, Iowa—very fine specimens, of different appearance from those grown about here. Rhode Island Greening, Newtown Pippin, Smokehouse, Roxbury Russet, Yellow Belleflower, Baldwin, Wine Sap, Black Gilliflower, Belmont, White Belleflower, Golden Russet, Newark Pippin, Winter Wine, Tulpehocken, Comstock, Brabant Belleflower, Jonathan, Lady Finger—an old Pennsylvania sort of third rate quality, Maiden's Blush, Kinsey's Sweet, Rambo, Tender Sweet, Vandervere—the Delaware sort, Grey Russet, White Pippin, Black Apple, Pennsylvania Red Streak, Yellow Pearmain, Fall Pippin, White Winter Pearmain, Gloria Mundi, Swaar, 3 unknown varieties, 3 seedlings.

From WM. ORANGE, Mt. Harrison, Mill-creek township, Hamilton county, we had, as usual, most liberal contributions, and very even, fine specimens. Rambo, Russet, Gloria Mundi, R. I. Greening, Vandervere, 2 varieties Belleflower, Doctor, Golden or Fall Pippin, Newtown Pippin, Leather Jacket Pippin, Milam, 2 varieties Seedlings.

From T. V. PETICOLAS, Union township, Clermont county. Terry's Red Streak—believed to be Rambo, Mammoth Pippin, Titus Pippin, Vandervere Pippin, Fall Pippin, English Golden Pippin, Michael Henry Pippin, Yellow Newtown Pippin, Rich Pippin, Green Newtown Pippin, Ramsdell's Sweeting, Golden Russet, Putnam Russet, English Russet, Kaighn's Spitzenberg, Newton Spitzenberg or Dutch Vandervere, Illinois Green, Tolman's Sweeting, Seek-no-further, Rambo, Small Black, Yellow Belleflower, Willow Leaf, Swaar, Wine Sap, London Winter Sweet, Red Gilliflower, Broadwell's Sweet, Sheep Nose, White Belleflower, Smith's Cider, Cheese Apple, Rawle's Janet, Red Siberian Crab, Green Seek-no-further, Romanite, Winter Pearmain, Lansingburg, Tulpehocken, Male Carle, Hubbardston Nonsuch, Black Apple, Pennock's Red Winter, Weaver's Winter Red, Virginia Green, Pumpkin Sweet, Summer Pearmain, Porter, Lane's Winter Green, R. I. Greening, Baldwin, Pryor's Red.

From A. WORTHINGTON, Mt. Ida, Storr's township, Hamilton county. Beautiful speci-

mens of Newtown Pippin, Fall Pippin, Detroit, Belleflower, Hubbardston Nonsuch—not correct—is it not Jonathan? Golden Russet, Carthouse, Pryor's Red, Baldwin, Black Apple, Lady Apple, Pumpkin Sweet, Gloria Mundi.

From RICHARD PAULL, Delhi township, Hamilton county—a great profusion of such splendid specimens as he has heretofore furnished so liberally to our autumnal exhibitions. Pennock, Monstrous Pippin, Baldwin Apple, Newtown Pippin, R. I. Greening, Putnam Russet, Roxbury Russet, Golden Russet, Black Apple, White Pippin, Romanite, Smith's Cider, Carthouse—which is not Gilpin and not known to Committee, Detroit, Belleflower, Ox Eye or Dutch Vandervere of Downing, Fall Pippin, Fall Pearmain, Vandervere Pippin, Rawle's Janet, Stockade Sweeting, Chandler Apple.

From M. McWILLIAMS, Delhi township, Hamilton county. 4 varieties, names not given.

From F. B. WILLIAMS, Walnut Hills, Hamilton county. Lady Apple, Pennock, Romanite, Rambour D' Eté, Mountain Vandervere, Yellow Belleflower, Black Apple, Campfield, Scarlet Pearmain, White Belleflower, Vandervere, Pryor's Red, R. I. Greening, Wine Sap, Virginia Greening, Wine Apple, Fall Pippin, White Pippin, Gravenstein? Roxbury Russet, Rawle's Janet, Summer Pippin, 2 unknown.

From S. M. CARTER, Beech Grove, Campbell county, Ky. Green Newtown Pippin, R. I. Greening, Romanite, Nicely's Greening, Rawle's Janet, 4 varieties unknown.

From WM. RESOR, Clifton, Hamilton county. 18 varieties, among which were the following: Belleflower, Dutch Vandervere, Vandervere Pippin, Chandler, Golden Russet, Canfield, Romanite, Rhode Island Greening, White Belleflower, Broadwell.

From DR. MUSSEY, Mt. Auburn, Hamilton county. 8 varieties, list and names not given.

From W. HEAVER. Wells' Apple, shown in 1848, now believed to be the true Baldwin.

From J. C. FERRIS, Poplar Ridge, Hamilton co., O.; an extensive collection embracing many fine kinds:—Yellow Belleflower, Gloria Mundi, Red Winter Pearmain, Long Island Russet, Winter Rambo, Ludlow Pippin, Smith's Cider, Red Winter Sweeting, Virginia Greening, Lady's Blush, Green Pippin,

Pound do, Kaighn's Spitzenberg, White Belleflower, Romanite, Holland Pippin, Blue Pearmain, Rawles Janet, Yellow Newtown Pippin, Rambo, Green Newtown Pippin, Pennock, Fallawater, Golden Russet, Wine Sap, Germaine's Seedling, Michael Henry Pippin, Vandervere Pippin, Roxbury Russet, Schoonmaker, Common Pearmain, Milam, Seedling, R. I. Greening, Pennsylvania Russet, Sweet Pearmain, Black Gilliflower, Danver's Winter Sweet, Æsopus Spitzenberg, Red Baldwin, Fall Pippin, American do, Male Carle, Newtown Spitzenberg or Dutch Vandervere, Black Apple, White Pippin, Seedling, Harrison's Favorite. Several varieties unknown.

From F. G. CAREY, Farmer's College, Hamilton co., O.; some of the most beautiful fruit in the Hall and much admired: Carey's Seedling, Kaighn's Spitzenberg, Peck's Pleasant, Fall Pippin, Yellow Belleflower, Tulpehocken, Wine Apple, Dutch Vandervere, Rambo, Yellow Newtown Pippin, Cooper—very large; Rhode Island Greening, Smith's Cider, Fall Pippin, Russett (seedling,) Carey's Seedling, Milam, Pumpkin Sweeting, Black Apple, Titus Pippin, Lansingburg, Gloria Mundi, Winter Sweet (a good keeper,) Black Apple, Detroit do, Green Newtown Pippin, Seedling (fine,) Virginia Greening, Spitzenberg, Golden Russet, Large Sweet, Roxbury Russet, No. 7, Good Keeper, several unknown.

This collection embraces several apples of great merit, both on account of beauty and flavor.

His Seedling, No. 1, is white, changing to yellow, flesh tender, prolific, vigorous, first quality.

No. 2 is red, flesh tender, yellow (resembling ox eye;) somewhat conical, eye sunken, stem short.

No. 3 is a Russet, resembling the Neat Russet—perhaps not a seedling.

From Mr. L. REHRUSS, Millcreek township, Hamilton county, O.; apples—Triumph Reinette, from a tree imported last year—a kind much admired in Germany—a rich red russeted, medium size, round, somewhat oblate.

From A. H. ERNST, Spring Garden, Millcreek township, Hamilton county; Kaighn's Spitzenberg, White Pippin, Yellow Newtown Pippin, Fall Pippin, Hollow Core Pippin,

Hunt's Green Newtown do, Lyscom, Black Apple, Yellow Belleflower, Newtown Spitzenberg, Roxbury Russet, Wine Sap, American Black Apple, Lady Apple, Boxford, Belmont, Golden Russet, Black Gilliflower, Randall's Best, Rambo, Connecticut Red Side, Swaar, Winter Grixon, R. I. Greening, King Apple of Ky., Unknown, Unknown, Goble Russet, Pennock, Rome Beauty, Maiden's Blush, Porter, Baldwin, High Top Sweeting, Danver's Winter Sweet, Rawle's Janet.

Communication from SAM'L SILSBEE.—The accompanying Apples are of a lot of Seedlings from the Farm of Capt. Kiler, Dayton, Ohio. Seed of a natural fruit was planted on his farm in 1805, and two trees reared; he has since from seed raised two more, having now four large healthy trees, seedlings, fine growth and prolific bearers. If amid the profusion of fine fruits, they possess any interest, they are at your service.

Respectfully,

S. SILSBEE

The committee consider them very similar to Smith's cider apples, both in flavor and appearance, rather longer.

From JOHN E. MOTTIER, Green township, Hamilton county; Vandervere Pippin, White do, Monstrous do, Golden do, Green Newtown do, Yellow do do, Æsopus Spitzenberg, Wine Apple, Rawle's Janet, Golden Russet, Ox Eye or Dutch Vandervere, Maiden's Blush, Smith's Cider, Rambo, 2 large lots of Apples.

From GABRIEL SLEATH, Storrs township, Hamilton county; 4 varieties, no name given.

From JOSEPH ORR, Laporte, Indiana; Fall Greening, Winter Sweet Pippin, Wine Sap, Black Apple, Golden Russet, Newark Pippin, Smith's Cider, Ashmore, Waxen Apple, Maiden's Blush, Winter seek-no-further, Vandervere Pippin, Pryor's Red, Twenty oz. Pippin, Alexander (of enormous size,) New York Pippin, Gilliflower, Westfield seek-no-further, English Russet, Wine Apple, Nursery Apple, Rose Sweeting, Summer Beauty, Broadwell Sweet, Fall Wine, Winter Apple, Pennock Red Winter, Fameuse, Fall Apple, Late Winter, Sweet Russet, Northern Spy, Never Fail or Rawle's Janet, Romanite, Roxbury Russet, Blue Pearmain, Newtown Pippin, Swaar, Reinette Blanch d'Espagne, Flushing Spitzenberg, Baldwin, Rhode Island Greening, Rambo, Æsopus Spitzenberg, English Russet.

From JAMES H. WATTS, Rochester, N. Y. ;
1 lot Northern Spy.

From ELLWANGER & BARRY, Rochester, N. Y., Mt. Hope Garden and Nursery ; Kilham Hill, Early Chandler, Reinette Triumphant, Swaar, *Æsopus Spitzenberg*, Lyman's Pumpkin Sweet, Blue Pearmain, Dutch Mignonne, Reinette Canada, Fameuse, Danver's Winter Sweet, St. Lawrence, Pomme Royale, Ribston Pippin, Green Sweeting, Belmont, Pennock's Red Winter, Hubbardstone Non-such, Hawthorndean, Monmouth or Red Cheek Pippin, Newtown Pippin, Gravenstein, Jonathan, White Spanish Reinette, Minister, York Pippin, Town, American Summer Pearmain, Indian Rare ripe, Streaked Gilliflower, Kendrick's Red Autumn, Red or Scolloped Gilliflower, Summer Pippin, Autumn Strawberry, Boxford, Porter, York Russet, Norfolk Beaufin, Pomme Gris, Canadian Golden Russet, Cabashea, Northern Spy, Api Petit, Rhode Island Greening, Autumn Calville, twenty ounce Pippin.

From LEWIS SANDERS, Grass Hill, Carroll county, Ky. ; Bohanan, Maiden's Blush, Unknown, Wine Apple, Canfield, Green Apple, Favorite do, Unknown, Romanite, Unknown, Limbertwig, Putnam Russet, Unknown, No. 8, Prince Apple, Pryor's Red, Green Cider Apple, Red Cider do, Native Crab, Red Cider Apple, Green do do, Late Keeping do, Blank, Washington Apple, Grass Hill Pippin or Fall Pippin, Yellow Belleflower, Sheepnose, Harts' White, Green Pippin, Roxbury Russet, Cat Head, Seedling Pippin, Rawle's Janet, Egg Shaped Apple.

From L. PUTNAM, of Muskingum co, O. ; a fine assortment of the celebrated fruit of the Putnam list, gathered from the original orchards. Among them the Rome Beauty, Prolific Beauty, Cooper, Putnam Russet, etc., were conspicuous. The former is remarkable for its size and regular shape, good color and fine eating qualities.

EZRA HILL, 8 varieties.

Dr. W. B. CHAPMAN, great show Apples.

C. DEWEES, 19 varieties Apples, display Peaches.

Plums.

From R. BUCHANAN. Late German Prune, and Emerald Drop.

From M. S. WADE. Five varieties.

From SAM'L. PEEL. Coe's Golden Drop, true.

Miscellaneous Articles.

From M. S. WADE. Pecan Nuts, Chestnuts, Pawpaws.

From R. BUCHANAN. Brown Figs, and Everbearing or Ohio Raspberries.

From E. Y. HOOPER. A plate of Dutch Medlars.

W. HEAVER. China Quince, rare ; German Medlar, new here.

AWARDS.

In the discharge of their functions at the late Exhibition, your Committee have felt the task to be laborious, and the duty they had to discharge a very delicate one ; where the merit of different lots approached so closely together that it was often very difficult to decide which was the best, a great exercise of judgment, and nice discrimination was necessarily essential, and a great deal of time required in making the awards. We sincerely trust that the disappointed will make every allowance for what they may consider our errors in judgment.

The following awards are rendered :

APPLES.

For the best ten varieties, not less than six of each, to M. S. Wade,	\$10 00
For the second best, to Robt. Neale,	5 00
For the best display of all kinds, to T. V. Peticolas, a Silver Cup, not less than,	20 00
For the second best, to Joseph Orr, of Laporte,	10 00

PEARS.

For the best six varieties, not less than six of each, to Robt. Neale,	10 00
For a handsome display, to Jos. Orr, of Laporte, Ia., a gratuity,	5 00
For the same, to A. H. Ernst,	5 00
For the best display of all kinds, to Ellwanger & Barry, a Silver Cup, not less than,	20 00

PEACHES.

For the best five varieties, to D. McAvoy,	10 00
For handsome specimens, to L. Young, of Louisville, Ky.,	2 00

GRAPES.

For the best three kinds, not less than six bunches, hardy varieties, to M. S. Wade,	5 00
For the second best, to G. Sleath,	3 00
For the best display of hardy grapes in variety, to Jno. E. Mot- tier, a Silver Cup, worth,	10 00
For the second best, to Robert Bu- chanan,	5 00
For the best bunch, (under glass) to Wm. Resor,	10 00
For the best three varieties, (under glass) to N. Longworth,	5 00
For the best display, in variety, (un- der glass) to R. B. Bowler, Sil- ver Cup, worth	15 00
For display of Black Hamburg, to W. Resor,	10 00
For the best group of assorted fruit, to M. McWilliams,	10 00

QUINCES.

For the best, to Chas. Cist,	3 00
For the second best, to J. C. Ferris,	2 00

PLUMS.

For the best twelve of four varieties, to M. S. Wade,	3 00
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PRESERVED FRUIT.

For display of handsome kinds, in variety, to M. J. Louderback, a Silver Cup, worth	10 00
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DIPLOMAS.

Diplomas were awarded to the following persons for their handsome displays of fruit.

Jno. R. Jackson,	Richard Paull,
S. M. Carter,	F. B. Williams,
Gabriel Sleath,	Lewis Saunders,
Nathan Hastings,	Samuel Peel,
R. G. Buckner,	Dr. Lewis De Shields,
S. Mosher,	Robert Kyle,
A. Whipple,	John Heltman,
J. W. Gilbert,	A. Worthington,
Henry Avery,	Mrs. Falmen Ball,
Wm. Orange,	J. C. Ferris,
F. G. Carey,	William Resor.

Respectfully submitted on Saturday, Oct.
13, 1850.

S. MOSHER,	} Committee.
JNO. SAYERS,	
J. A. WARDER,	

REPORT OF VEGETABLE COMMITTEE.

To the President and Members of the Cincinnati Horticultural Society.

GENTLEMEN,—We are happy to be able to state that we have had something more than empty tables placed before us for our consideration during the recent Fair. Indeed, this department of Horticulture would seem to be looking up, ambitiously aspiring after some of the honors and emoluments to be obtained at your hands and at the full coffers of your benevolent Treasurer—at least, so we might judge from the quantities and qualities of the varied articles upon which it has been our especial province, and particular pleasure, to pass judgment and render awards. Certainly the paucity of material, frequently complained of by some of the judges who have preceded us, no longer exists; the greatest difficulty appears to have been to find room to display the large quantities so liberally furnished for exhibition, and we are proud to say that the articles were generally superior in quality also. This is as it should be—though less pretending than some of their gaudy neighbors, the flowers over in the parterre, from which they are separated by a fence or hedge, as if to throw them out of sight in the background—still, the vegetables are very important members of the body Horticultural—they are solid blessings, necessary evils, if you choose, but very good things in their way, even in a gentleman's kitchen, and thence upon the dinner table, never so refined, for we must all live by eating, and it has been clearly demonstrated by Mr. Graham, of dieting doctrine, that man is *not* a carnivorous animal, Cuvier and comparative anatomy to the contrary notwithstanding. How much more important must they not be, therefore, to the humble cottager who has his little garden, which, if well tilled and judiciously planted, will contribute so large a proportion of nutritious aliment for

the support of his family, that it has become a byword with those quiet, but often successful horticulturists, the old country women, that "a good garden is half living." We trust that the truth of this adage will be more and more appreciated by our laboring classes; indeed, one of the things we most hope to see copied into our customs, from the European nations, is "*the allotment system*," which has been found to contribute so much to the relief and happiness of the poor, in England especially. By this plan, wealthy proprietors are enabled to secure better rents, and, what is of far more consequence, the poorest family may have an opportunity of reaping some of the rich blessings so bounteously furnished by our benignant mother earth, and are also supplied with a happy, healthful and productive retreat and occupation for a spare hour, instead of the wretched, unwholesome and ruinous resort and idleness of the drunken dogger.

Pardon this digression; *revenons a nos moutons*—that is, let us come back to our cabbages, which, by the by, cut quite a sorry figure at our exhibition—for though they are grown in immense numbers and marshalled by thousands upon the hurricane decks of our steamers going to the South—very few showed their heads within our halls. Is it true that the Brassica family do not belong to good society? Their names, to be sure, do not sound very aristocratic—Drum-head, Savoy, Caul-i-flower, Rape, Flat Dutch, Red Top, Brussell's Sprouts, Bore Cole, are perhaps poor company for the refined gentry sometimes met with in our halls, whose very names are unpronounceable, so that when about to be introduced to company, one is often obliged to call on a good-natured gardener, or learned botanist, perhaps, who vainly endeavors to reach the understandings of his expectant audience through their sense of hearing, and, in despair, is at last obliged to hand them the

card which these fine people always wear about them, so that their grand titles may enter your brain through the eye, whether the understanding be enlightened or not.

Vegetables.

From J. B. SHRODER. 2 Pumpkins.

From M. S. WADE. 6 stalks Celery, 12 Blood Beets of unusual length and beauty.

From R. SHOEMAKER. 18 large ears of field Corn.

From ROBERT KYLE. 3 varieties Potatoes, 7 varieties Corn, 1 Green Winter Pumpkin, 1 Crook-necked Squash.

From H. B. TURBELL, Pleasant Ridge, Hamilton county. 1 dozen ears Yellow Field Corn, $\frac{1}{2}$ bushel Neshannock Potatoes, 3 Field Pumpkins, 3 Bell Pumpkins, 2 California Squashes.

From WM. ORANGE. 3 varieties Corn, 4 varieties Potatoes, 5 varieties Beans, some large Tomatoes, 1 large stalk of Okra, Oyster Plant Roots.

From JOHN McFADDEN, Walnut Hills. 12 stalks of Celery.

From A. WORTHINGTON. $\frac{1}{2}$ bushel Potatoes, 1 dozen Tomatoes, 2 Pumpkins, 3 Kerahaws.

From GOTTLIEB MYERS. Yard Beans, Balsam Apple.

From Mrs. PROCTOR, Kenton county, Ky. 1 Texas Squash or Hungarian Bonnet.

From J. C. FERRIS. Canada Crook Neck Squash, Tomatoes, Field Corn.

From WM. CAREY, College Hill, Hamilton county. 10 varieties of Potatoes—English Whites, Irish Grey, Neshannock, Black, Kidney White, Boyle Blue, Pink Eyed Brown, Orange, Pink Eyed Neshannock, Merino.

From NATHAN HASTINGS. 8 Pumpkins, the produce of 4 Seeds, weight 800 lbs., 6 Marrow Squashes, 6 Canada Crook Neck Squashes.

From HENRY IVES. A new variety of Sugar Corn, blue grains.

From F. G. CAREY, Farmers' College. 12 ears Sweet Corn, 12 ears Field Corn, 12 ears Field Corn (York).

From Dr. WM. H. BRISBANE, Cheviot. 3 large pods of White Okra, seed brought from South Carolina.

From GABRIEL SLEATH. 3 varieties Corn, 1 lot Sweet Potatoes, 4 varieties Potatoes.

J. BRACE, Cincinnati. Purple Egg Plant,

Long Egg Plant, Valparaiso Squash, Sugar Pumpkin, Summer Squash, (seeds from Landreth,) Bell Pumpkin, New England Pumpkin, Canada Crook Necked Squash, Golden Crook Necked Squash, Squash Pepper, Mang-el Wurtzel, French Sugar Beet.

R. P. RESOR, Clifton. 6 Pumpkins, 6 Bell Pumpkins or Kershaw, 4 Marrow Fat Squashes, 6 Early Fat Squashes, 7 varieties Potatoes, 3 varieties Onions, 6 varieties Chalots, 1 variety Tomatoes, 1 variety Beans, 2 varieties Carrots.

From SEBASTIAN RINZ. Sweet Potatoes.

From W. HEAVER. Lady Finger Peppers, Large Sweet Peppers, Yard Beans.

Miscellaneous Articles.

From HIRAM NASH. A sample of Vinegar in a neat cask, a sample of Bottled Cider.

From ROBT. BUCHANAN. 4 bottles Catawba Wine.

From MRS. BUCHANAN, Newport, Ky. 1 small Jar of Apple Jelly.

From HENRY IVES. 3 jars Jelly, 2 bottles Raspberry Vinegar.

From MRS. LOUDERBACK. 6 jars Brandied Peaches, 1 jar Preserved Quinces, 1 jar Preserved Pears, 1 jar Preserved Siberian Crab Apple, 2 jars Preserved Peaches, 1 jar Preserved Raspberries, 1 jar Preserved Green Gage Plums, 1 jar Quince Jelly, 1 jar Currant Jelly, 3 jars Tomato Pickles, 1 jar Cucumber Pickles, 1 jar Preserved Strawberries, 2 boxes Tomato Figs.

AWARDS.

The following premiums, gratuities, &c., have been awarded by your Committee to the several successful competitors, at the Fall Exhibition, held on the 2d, 3d, 4th and 5th days of October, 1850, to wit:

For the best display in variety, to R.

P. Resor, a premium of \$15 00

Second best display in variety, to W.

Resor, a premium of 10 00

Beets.

Best Blood Beets, to M. S. Wade, a premium of 3 00

Beans.

Best display in variety, to Wm. Orange, a premium of 3 00

Egg Plants.

Best three fruits, to D. McAvoy, a premium of 3 00

Second best, to Richard Jennings, Gardener to P. Evans, a premium of 2 00

Potatoes.

Best display in variety, to G. Sleath, a premium of 10 00

Second best, to Wm. Carey, a premium of 5 00

Best half bushel, to E. Shroeder, a premium of 3 00

Second best, to A. Worthington, a premium of 2 00

Pumpkins.

Best display in variety, to H. B. Turrill, a premium of 5 00

Second best, to E. Shroeder, a premium of 3 00

Squashes.

Best display in variety, to N. Hastings, a premium of 5 00

Second best, to J. C. Ferris, a premium of 3 00

Tomatoes.

Best twelve fruits, to A. Worthington, a premium of 2 00

Field Corn.

Best twelve ears of Field Corn, to Amos Worthington, a premium of 3 00

Second best, to G. Sleath, a premium of 2 00

Sugar Corn.

Best twelve ears, planted July 19th, to James Neely, (Gardener to Dr.

Warder,) a premium of 3 00

Second best, to J. Brace, a premium of 2 00

Celery.

Best six stalks, to J. McFadden, a premium of 5 00

Second best, to Jacob Story, a premium of 3 00

Peppers.

For the best Peppers exhibited, to D. McAvoy, a gratuity of 1 50

In the absence of the Wine Committee, we tasted Nash's Cider and Cider Vinegar, and found it to be of first quality. We have, therefore, awarded to Mr. Nash a Diploma,

and also a Diploma to Mr. J. H. Laning, for his Ohio and Mississippi Filterer and Water Cooler.

All of which is respectfully submitted.

ROB'T. M. MOORE,
SAM'L M. CARTER,
A. WORTHINGTON,
Vegetable Committee.

Cincinnati, October 12th, 1850.

REPORT OF FLOWER COMMITTEE,

To the President and Members of the Cincinnati Horticultural Society.

THE recent exhibition by your members has furnished unmistakeable evidence of the growing taste for the beautiful art of Horticulture which has been so happily fostered by our society. From it we also learn that not only the amateurs, and the community at large, but the gardeners also have been greatly benefited by our efforts, and the latter certainly deserve to reap the reward, for they have been, from the first organization, among the foremost in the enterprise, and sometimes, too, when well meaning persons, engaged in the same business, have, from mistaken views and short-sighted policy, endeavored to dissuade them from having any thing to do with a society which, they said, would enable the amateurs to grow plants as well as themselves, and thus interfere with their business. The truth is, our society has diffused a taste for flowers among all ranks of the community, and thus the demand for plants has increased a thousand fold, and though the prices are much lower than formerly, for some articles, the aggregate amount of money expended is vastly greater than in past years. The newspaper reports of our weekly meetings, too, are read with interest throughout the country, and by means of the periodic congregation and discussions thereat, and the wide spread diffusion of the news, an immense number of persons become interested in them and are induced

to plant and train for themselves, so that thousands of plants are annually disseminated beyond the limits of our city and neighborhood, and often in places where one would little expect to meet with them. The great change in the feelings of our towns people is too manifest to need a further notice at this time, especially as it was dilated upon by the committee in their report at the close of the Spring exhibition.

The gentle hints dropped by a previous committee, at an earlier period of our history, appears to have had a good effect upon the whole appearance of the *hot house and green house plants*—the pots are not so mossy and dirty as they have hitherto been seen on some tables, but every thing has assumed a more neat and tidy look. There is also more and more attention bestowed upon the manner of growing the plants, in good shape and snug habit, than formerly, so that altogether, we may congratulate ourselves that our society, by its gentle reprimands, and well timed suggestions, as well as by its liberal premiums, has been of an essential service to the gardeners themselves, in this department, encouraging them to renewed exertions, and discouraging careless and slovenly habits; of course every body else is the gainer by the increased amount of pleasure experienced from seeing things look more as they should do, and unalloyed by the disagreeable necessity of observing in our collections, plants that would disgrace the window of a log cabin.

Designs.—In this department of the decorations much ingenuity is displayed, but we must confess we were somewhat disappointed that the large premiums offered, had not induced more elaborate and tasteful efforts. In some of the larger designs there was too much formality and stiffness and similarity to what we have had before; in others too much of the finical was observed. Let us hope that the inventive genius of our people will produce

Something new in this line by another occasion. The model English flower garden was quite a neat, pretty thing, but from its very nature could not be very imposing, and the proportions were not well kept up. The fact is, in this country, the geometric style of laying out grounds, unless in peculiar situations, does not appear to be in vogue, and we trust it never may be so. Further, we suggest, that the *Lycopodium oesium*, or some such trailing plant with minute foliage, would have been much more appropriate than the *Maurandya* for training about the summer house—still this design was considered the best.

The castle and park, with lake, etc., etc., attracted much attention, and the fair proprietress won much praise for her ingenuity and industry in its preparation. The lake, and especially the trees and shrubbery were admirably managed—the road was much too wide to be in good proportion and might have been differently located by a skillful landscape gardener.

The "Buckeye welcome" was a very happily conceived device, and its location, near the entrance of the Hall was well selected by the council—especially since the Oranges as well all the Buckeyes were so particularly desirous of extending a most hearty welcome to the many distinguished strangers we expected to have at the Fair. Simple as was the design, it must have cost a great deal of labor to produce it, and we know it gave a great deal of pleasure to the visitors, especially those who came to receive a Buckeye welcome.

Pagodas, Turrets, Towers, and all that sort of architecture, done in moss, with flowers, and mosaics of richly colored petals, were there in numbers, evincing the desire to contribute to the variety of the exhibition, and a laudable exercise of industry and ingenuity in their composition which are truly praiseworthy: for no one who has never aided in the construction of these things can form any idea of

the amount of expense, labor, time and materials required for them.

In these passing remarks, it is impossible to particularize all of the designs which were exhibited; they will be found in the lists which follow, and the awards will be seen in the lists of premiums—but we are happy in this place to mention that our friends, the children, are coming forward to aid us in these matters—and we shall recall your attention to the beautiful and tasteful fancy bouquet stand, so snugly furnished with moss, and crowned with neat bunches of exquisite flowers. This pretty device was from John and Isaac Jackson who have become somewhat famous for their handsome contributions to our Fairs; let them take care that master Lewis does not overtake them: and their sisters, too with their contribution of pretty hoop wreaths, would almost make us believe that the taste for horticulture was hereditary in this family. The children from the Cottage Garden also furnished their quota of decorations, among which the mosaic of bachelor's buttons on a ground of moss, representing two hearts united, would almost induce one to suppose that the design had been furnished by one who could not boast of being single-hearted, did we not know that the little girl who produced it is almost too young to know that she has a heart. Let us encourage the children, even in their simple efforts; it will be a stroke of policy to secure their interest, for will they not become men and women, to supply our places ere long, when we shall have been obliged to withdraw from the field?

Moss vases, from different contributors were much admired, and were a great improvement upon their predecessors. Among them, however, we observed one which was very pretty and quite unique, being made of pieces of lichen and fungi, quite a cabinet of these curious things, enough to occupy a botanist engaged in the study of cryptogamous plants,

for many a long day in the investigation of their wonderful properties.

Grass bouquets are becoming much more fashionable here than formerly, for though we do not have so great a variety of this family of plants in our meadows as are to be found in many other sections of the country, still there are some cultivated expressly for this purpose, and it is surprising how pretty a group may be formed from them. The *Uniola latifolia*, a wild plant in this region, has been much improved by garden culture, air and sunshine, and is an indispensable addition to these permanent winter bouquets. It was found a few years since on Bank Lick by our excellent friends the botanists, Joseph Clark, and the lamented Thomas Lea, brought home to their gardens, and thence distributed among their friends.

We must not overlook the rustic flower tubs with a profusion of vigorous plants grown in them. The idea is not new, even among us, but they are very desirable things upon a lawn, and make pretty objects when well filled with showy plants, and well managed, especially if the grounds be in keeping with their rustic appearance. They would form admirable accompaniments to rocks, cascades, old trees, and mossy banks in some narrow and secluded dell.

The committee were glad to see so many good roses in pots, indicating the care of the gardener, and well meriting the awards rendered; as observed by a former committee, our cultivators appear, too much to overlook the pot culture of this class of plants, one reason of which, no doubt, is the great demand for them, preventing the accumulation of a large stock, and requiring the severe clipping of the old plants for wood to produce new ones. So much the better for those who grow them; and we must wait for better plants at our exhibitions until time shall have remedied the evil; at present, the propagators, (always the

largest contributors at the Fairs,) find it much more to their interest to sell small or young plants, than to keep them until they can have time to make a larger growth. One of these days we shall have our roses for forcing or winter blooming, to which some varieties are so well adapted, especially some of the remontants, whereas we now rarely see any quantity of this class in pots, unless it be the young plants prepared for the spring sales, and hence there was no competition for pot plants under this head, though a handsome premium would have been awarded.

Verbenas have grown upon our affections amazingly within a few years, and they have at the same time improved very much, in habit, colors, size and form of the flower, and beauty of the truss, which we now find broad, even and short, instead of the old-fashioned sorts, long and narrow, then again, the size of the *florids* is such that they should lose their diminutive title, for some of them expand their regular discs almost in a perfect circle, and of such a diameter that a quarter of a dollar will barely conceal them when applied to their surface. During the summer these plants do best in the open border; but, if properly grown they make very pretty objects in pots, and this is the best method of exhibiting them, but the society should offer a liberal premium. The chief competitors are Messrs. Sayers, Heaver and Jackson, all of whom have succeeded in producing seedlings of merit, beside the imported varieties constantly brought on—among the latter, Beauty Supreme, Defiance, Exquisite, Blue Bonnet, Royal Purple, Major Ringgold, may be named as the best, but not to be placed before some of the former originating among us, the best of which is Kossuth, a rich rosy pink with a white eye; we should also name Bem, Eliza, and No. 5, No. 1, No. 2, No. 3, No. 4, No. 6, of Mr. Sayer's. Frits, a pale blue, Splendens, No. 25, and others of

Mr. Heaver; and Gen. Taylor, a new white; Mrs. Sedam, and others, beside a new pink with white eye, said to excel all the rest, at S. S. Jackson's.

Dahlias, which contribute so largely toward the gorgeousness of an autumnal display, were later than usual in their blooming this season. Beside this, the grasshoppers ruined many of the flowers, and forced the gardeners to employ many expedients to protect them: those which were shielded with inverted flower pots, were much improved by the shading from the hot sun, and the *Dahlia* stands were never finer in our halls than at this Fair. That amateur who could not find a satisfactory assortment upon our tables this year, must indeed be hard to please. We find many new faces among them, and new names to match, some of which are hard to pronounce and have a very foreign look. Of these several are superior in color and form, but we can not always say so much for every new thing.

As usual, Messrs. Jackson, Heaver, Ferris, and Sayers, are the largest exhibitors, the latter was so fortunate as to take all of the first premiums. The first named has been stimulating his sons to grow seedlings, and among several which were very good, they produced one which the committee considered worthy of the premium. It has been named Mrs. Jackson: we trust it will not disappear as some of its predecessors have done, so soon as named and "prized."

The Committee respectfully request that the attention of the Society be early given to a few suggestions which are herewith laid before it.

1st. To diffuse the interest in our exhibitions as widely as possible, and to excite the efforts of amateurs as well as professed gardeners, it would be well to have two classes of awards in the schedule or prize list.

2d. To avoid the confusion, the hurry, and the extreme labor of examining the whole

floral display by any one set of men, it is proposed that the Committee be divided, or have the privilege of dividing itself on all such occasions, and if necessary, let each section have aids appointed to assist in the decisions; for, beside the division of labor which would result, we should have the benefit of the best judges in each department. One might be a good judge of Green House Plants or *Dahlias*, another of *Roses*, and neither so well qualified to decide on the tastefulness of the decorations, as a third selected expressly for that service.

Lastly. It is urged upon you immediately to prepare, or begin to prepare the schedule of prizes to be awarded next season. Many things require timely notice to have them suitably prepared. It is hoped that the liberal policy pursued during the past year, and which has undoubtedly contributed much to the brilliancy of our recent exhibition, will continue to be pursued. A change in this particular would have a very bad effect.

We now refer you to the lists for the details.

GREEN HOUSE PLANTS, ETC.

From S. S. JACKSON, Storrs Township. 2 *Lycopodium cespium*, *Eupatorium elegans*, 2 *Lophospermum scandens*, *Salvia leucantha*, *Coffea arabica*, *Cycas revoluta*, *Bletia Tankervillea*, *Furcraea gigantea*, *Jasminum grandiflorum*, *Jasminum floribunda*, *Fabiana imbricata*, 2 *Coxcombs*, *Hoya carnea*, *Acacia prostrata*, 2 *Buddleia Lindleyana*, *Stephanotus floribundus*, *Lantana Sellowii*, *Lantana rubra*, 2 *Lantana mutabilis*, *Myrtus multiplex*, *Gardenia multiflora*, *Gardenia radicans*, 2 *Lycopodium* (varieties,) *Echiveria coccinea*, *Begonia discolor*, 3 *Salvia coccinea superba*, *Crinum amabile*, *Begonia parvifolia*, *Vanilla aromatica*, 2 Tree violet, *Maurandya Barclayana*, *Maurandya alba*, *Maurandya rosea*, 3 *Rondeletia speciosa*, 3 *Heliotropium Voltaireanum*, 2 *Heliotropium souvenir de Liege*, 2 *Heliotropium intermedia*, 2 *Cyclamen* (varieties,) *Sarracenia* (varieties,) 3 *Oxalis Bowii*, 2 *Russelia juncea*, *Fuchsia rosea alba*, *Fuchsia*

corallina, *Centradenia rosea*, *Begonia* (varieties,) *Begonia rosea*, *Begonia fuchsoides*, *Laurus camphora*, *Euphorbia splendens*, *Calathea zebrina*, Dwarf Lemon, 2 *Gesneria zebrina*.

Roses in Pots—Bourbons.—2 *Souvenir Malmaison*, *Deil de Duc' d' Orleans*, *Le Grenadier*, 2 *Marshal Villars*, *George Cuvier*, *Henry Clay*, *Jupiter*, *Dr. Roques*, *Hermosa*, *Leveson*, *Gower Virgile*.

Tea Roses.—Mrs. Niles (Jackson,) *Triomphe de Luxembourg*, *Hymene*, *Elize Sauvage*, *Adam*, *Devoniensis*, 2 *Mansais*, *Melville*, *La Virginal*, *Princess Maria*, *Yellow Noisette*, *Mrs. Siddons*.

Bengal Roses.—Prince Eugene, Purple crown, Beau carmine, Cels, Jacksonia, Green rose.

1 Car load Evergreens for decorations, 1 Wreath 80 feet long, 8 Stands of Dahlias.

From JOHN SAYERS' Cottage Garden, Reading Road. 8 *Hibiscus sinensis*, 3 *Ficus elastica*, 2 *Mimosa sensitiva* (sensitive plants,) 2 *Oxalis Bowii*, *Heliotropium souvenir de Liege* new, 4 *Heliotropium Voltaireanum*, 2 *Vinca alba*, 2 *Begonia rosea*, 2 *Begonia Evansiana*, 3 *Begonia parvifolia*, *Begonia hydrocotylifolia*, *Begonia fuchsioidea*, 2 *Justicia carnea*, 2 *Gen. Tom Thumb geranium*, *Roses*, *Triomphe de Luxembourg*, *St. Radigonde*, 2 *Souvenir de la Malmaison*, *Aimée Vibert*, *Hymene*, *Green flowering Bourbon Queen*, 12 *Coxcombs*, *Salvia leucantha*, 2 *Maurandya Barclayana*, 2 *Manettia cordifolia*, *Lantana mutabilis*, *Gloxinia*, 29 *Verbenas*.

DAHLIAS.

A stand of 24 Varieties viz., *Hippolyte*, *Emily*, *Phoenix*, *Joshua Longstreth*, *Queen of England* (Donadi,) *Schneckerowe von Estherthal* (Donadi) the best white we have seen, *Bel de Duc*, *Cleopatra*, *Roi de Pontille*, *Walter Hilson*, *Madame Zahler*, *Lady St. Maur*, *Star*, *Standard of perfection*, *Toison d'or*, *Richard Cobden*, *Rainbow*, *Princess Radzville*, *Master Merriman*, *Visot*, *Resiguire*, *Belted Knight*, *Beauty of Sussex*, *Delight*, *Miss Blackmore*. 12 varieties of Dahlias; display Dahlias.

Display *Verbenas* in pots; do. cut Flowers; hand Bouquets.

From ELIZA JANE BROOKS. Moss basket and Flowers, and 1 design, Floral hearts.

From EMMA BROOKS. 2 hand Bouquets.

Stands of *Verbenas*, and of miscellaneous cut Flowers too late for competition.

From Miss EMMA FERGUSON. 1 pair grass Bouquets.

From JOHN H. & ISAAC H. JACKSON. 12 hand Bouquets, 1 large do.

From W. HEAVER, Reading Road Nursery. 25 Green house and Hot house plants in bloom: *Passiflora hybrida*, *Passiflora Jeffriesii*, 2 *Manettia cordifolia*, *Maurandya Barclayana*, *Maurandya Barclayana alba*, 2 *Plumbago capensis*, *Justicia carnea* J. picta, *Certoceras reflexus*, *Brunfelsia americana*, 2 *Begonia parvifolia*, *Begonia incarnata*, *Begonia fuchsoides*, 2 *Lantana mutabilis*?—new sort with large flowers, *Rondelitia speciosa*, *Ixora rosea*, *Abutilon striatum*, *Plumbago Larpentii*, *Heliotropium Voltaireanum*, 2 *Russelia juncea*.

ROSES IN POTS.

Noisette—Le Similor, *Solfaterre*, *Elegans*, *Luxembourg*, *Princess d' Orange*, *Smithii*.

Bourbon.—*Emilie Courtier*, *Lady Canning*, *Hersilie*, *Henri du Plantier*, *Phoenix*, *Souvenir de la Malmaison*.

Tea.—*Floralie*, *Cels* (multiflora,) *Bougère*, *Antherose*, *Melville*, *Caroline*.

Bengal.—*Louis Philippe*, *Marjolin*, *La Camöens*, *Roi de Cramoisie*, *Indica alba*, *Olympie*.

Fuchsias.—*Coralina*, *Exoniensis*, *Napoleon*, *Mrs. Eden B. Reeder*, *Magnificent*, *Seedling No. 13*, *Lady Milbank*, *Acantha* and 45 miscellaneous plants.

Dahlias, 24 blooms—*Belle de Paris*, *Ultimatum*, *La Tour d'Auvergne*, *Gaiety*, *Queen of Primroses*, *Mrs. Buchanan*, *Admiral Stopford*, *Lady of the Lake*, *Jenny Lind*, *Beauty of Paris*, *Flora Superba*, *Walter Hilson*, *Golden Souvenir*, *Boul de Feu*, *Caractacus*, *Col. Baker*, *Cheltenham Queen*, *Queen of the French*, *Caleb Cope*, *Toison d'or*, *Rainbow*, *Lady Antrobus*, *King of Lilacs*, *Standard of Perfection*.

In the general display, specimens of the following varieties were shown in addition to duplicates of many of the above viz:—*Marchioness of Exeter*, *Miss Lex*, *Empereur de Maroc*, *Constantia*, *Beauty of Sussex*, *Bridal Ring*, *Harold*, *Essex Champion*, *Nihil*, *Bijou*, *Isis*, *Marchioness of Lorn*, *Dowager Lady Cooper*, *White defiance*, *Horace Binney*, *Dazzle*, *Cleopatra*, *Mrs. Jones*, *Viscount Resiguire*, *Fire Column*, *Mary Anne*.

2 twelve in. Bouquets, 2 six in. Bouquets, 2 flat Bouquets, 89 Bouquets in variety.

From ANDREW T. ROSS, of Reading Road

Nursery. 20 miscellaneous Plants, 1 monthly bush Alpine strawberry.

From Miss IVES. 2 stars composed of Dahlias, 1 large Bouquet, a variety of cut flowers for decorations.

From Mr. GOTLEIB MYERS, Columbia township. 1 bunch Chestnuts, 1 pot Rosemary, 1 Lemon tree with fruit.

From GABRIEL SLEATH, Storrs Township. 100 Bouquets, a large variety of choice cut flowers for decorations.

From Mrs. R. M. BARTLETT, Cincinnati. 2 trusses Coxcombs, 2 Bouquets.

From Mrs. BICKHAM, Storrs Township. 5 large Bouquets.

From ROBERT NEALE, Mt. Carmel, Clermont County, Ohio. 2 grass Bouquets, and large Bouquets fine flowers.

From Miss PERRY and Miss COMSTOCK. 1 grass Bouquet each.

TREES, FLOWERS AND PLANTS.

From C. F. KELLOGG. 1 large Shaddock Tree, with fine green and ripe fruit.

From EDEN B. REEDER, Cincinnati, O. Dahlias, Verbenas, Roses, and various other flowers and evergreens to decorate the Hall.

From Dr. LOUIS DE SHIELDS. A variety of cut Flowers, consisting of Dahlias, Roses, etc.

From Miss ORANGE. 1 Wreath thirty feet in length.

From WM. ORANGE. Orange Tree with large fruit, Myrtle Orange with fruit, 2 Pomegranates with fruit, Plumbago capensis, Cestrum nocturnum, Jerusalem Cherry, Laurel Bay Cherry, Lavandula spica, Aucuba japonica, 20 varieties of Roses.

From Dr. SHALER, Newport, Ky. 10 varieties of choice cut Flowers, (Roses.)

From S. M. CARTER. A large lot of choice cut Roses and other Flowers to decorate the Hall.

From Mrs. FLAMEN BALL, Clifton. A basket of cut Flowers, comprising Verbenas, Roses, Heliotropes, Dahlias, Zinneas, Tube roses, &c., and quantities of Marygolda, and Coxcombs for decorations.

From Mr. WM. EVANS, Lexington, Ky. 1 box Coxcombs.

From Mrs. S. B. NEILL, George street. A choice lot of Dahlias.

From WILLIAM RESOR, Clifton, Hamilton county. Thunbergia fastuosa, Lasiandra splendens, Begonia fuchsioides, Begonia

hydrocotilifolia, Begonia incarnata, Salvia Leucantha, 4 Salvia splendens, Heliotropium Voltaireanum, Heliotropium Souvenir de Leige, Columnea grandiflora, Allamanda cathartica, Mimosa sensitiva, 2 Achimenes grandiflora, Achimenes pedunculata, Achimenes rosea, Achimenes coccinea, Hippocyrta strigulosa, Plumbago capensis, Plumbago Larpentii, Melastoma betromala, Æschynanthus parasiticus, Euphorbia splendens, Cereus Scottii, Barnardesia Rosea, Fuchsia Princess Alice, Fuchsia Expartea, Metrosideros semperflorens, 16 Oxalis Bowli, Crinum capense, Gesneria zebrina, Lycopodium cosium, Torrenia asiatica, Stevia serrata, Abutilon striatum, Abutilon venosum, Justitia carnea, Lantana Sp? Russelia juncea, Double White Myrtle, Daphne striata, 2 Ardisia crenulata, Rhododendron ponticum Cantaulien Var? Erica mediterranea, Laurus ouilaban, Camellia japonica, Azalia indica, Jasminum odoratissimum, Asclepias curassavica, Cuphea platycentra, Stigmaphyllon ciliaris, Cytisus racemosus, Goldfussia an-cisophylla, Hoya carnosa, Acacia pendula, Acacia longiflora, Acacia linearis, Acacia undulata, Acacia pulchella, Acacia floribunda, Acacia armata, Habrothamnus elegans, Olea fragrans, Thea viridis, Myrtus, 2 Orange Trees, Malvaviscus mollis, Magnolia fuscata, Eugenia jambosa, Agave americana, Agave americana variegata, Cycas revoluta, Bonaparteia juncea, Aloe, 66 beautiful Bouquets composed of the choicest flowers.

From R. P. RESOR, Clifton. 2 Rustic Flower Tubs, filled with a variety of blooming Plants in flourishing condition, 30 Bouquets Choice Flowers, 2 twenty inch Bouquets, 1 large basket Choice cut Flowers, 18 Green house Plants.

From HENRY BRACHMAN, Cincinnati, O.; Abutilon striatum, Achimenes grandiflora, Do. picta, Asclepias curassavica, Begonia discolor, Do. argyrostigma, Do. parvifolia, Do. zebrina, Campanula pyramidalis, Centradenia rosea, Ficus elasticus, Gallardia picta, Goldfussia anisophylla, Hedychium coronarium, Mimulus moschatus, Melaleuca diosmæfolia, Oxalis Bowli, Phormium tenax, Pittosporum undulatum, Do. foliis variegatis, Russelia juncea, Rochea falcata, Solanum jasminoides, Maurandya Barclayana, Loasa lateritia, Justicea carnea major, Manettia cordata, Scarlet

geranium, *Plumbago capensis*, *Phlox Drummondii*, *Heliotropium peruvianum*, *Tropaeolum majus*, *Tagetes erecta*, *Do patula*, *Rosa odorata*, *Zinnia elegans*, *Amaranthus*, or *Prince's Feathers*, *Alyssum maritimum*, *Dianthus sinensis* (hybrid,) *Aster do*, *Verbenas*, in variety, *Vinca rosea*, *Do alba*, *Rosea*, *Madame Desprez* (bourbon,) *Le Pactole* (noisette,) *Cels* (Bengal.)

From Mrs. D. E. STRONG, Fifth street, nine beautiful Bouquets.

DESIGNS AND VASES.

From MARY W. HILL, 2 Vases and Grass Bouquets.

From Misses ORANGE, Mt. Harrison:

1. Cottage, Water, Boat, Grotto, Shells.
2. Arch, with words, Buckeye Welcome, surrounded with Stars of Buckeyes. Beneath the Arch a flower stand covered with Moss and Buckeyes. with an infant Buckeye among the flowers. On the top a Moss Eagle.

3. A Guitar made with Moss.

4. A Chair covered with Moss.

5. A Vase covered with Moss and Fungus, supporting forest branches and leaves and fruit; 2 Moss Vases, with wild Grasses, etc.

From JOHN McFADDEN, Walnut Hills: A Harp and Crown composed of a variety of flowers.

From R. DAVIES, Gardener to REUBEN RESOR, Clifton: A Flower Garden geometrically laid out in walks and parterres, with summer house and living plants.

From WM. RESOR, Clifton: 2 Moss Vases, with Bouquets, fifty inches high.

From Mrs. WM. HEAVER, Reading Road: Model for a country Residence, Gothic style, with park and ornamental grounds, water fowl, lake, shrubbery, walks, etc., etc.

From Misses JACKSON: 20 round or hoop Wreaths.

From ANDREW T. ROSS: Floral Star.

From F. G. CAREY: A Cornucopia, with rich display of fruits, etc.

From J. SAYERS: Moss Vases, 20 inches high; Octagon Summer House, gothic, covered with moss and ornamented with flowers; Floral Temple per son, George Brooks.

From JOHN H. and ISAAC H. JACKSON: 1 Moss covered Bouquet stand, a beautiful design.

From EDWARD KELLY, gardener to R. B. BOWLER: a Pagoda ornamented with bright petals of flowers.

AWARDS.

PLANTS AND FLOWERS.

For the best display of Green House Plants in bloom, to S. S. Jackson, a silver cup worth \$25 00
For the second best display, to Wm. Heaver, a silver cup worth 15 00
For the best display of Green House and Hot House Plants, in or out of bloom, to Wm. Resor, a silver cup worth 20 00
For the second best display, to N. Longworth, 10 00

DAHLIAS.

For the best twenty-four dissimilar blooms, to John Sayers, 15 00
For the second best, to Wm. Heaver, 10 00
For the third best, to J. C. Ferris, 5 00
For the best twelve dissimilar blooms, to John Sayers, 10 00
For the second best, to S. S. Jackson, 7 00
For the best display of Dahlias, to John Sayers, 15 00
For the second best, to Wm. Heaver, 10 00
For the best Seedling, called "Mrs. Jackson," to John and Isaac Jackson, 8 00

ROSES IN POTS.

For the best 6 Bourbons, to S. S. Jackson, 8 00
For the best 6 Teas, to S. S. Jackson, 5 00
For the best 6 Noisettes, to Wm. Heaver, 5 00

VERBENAS.

For the best display in pots, to John Sayers, 3 00
For the best twelve, in single trusses, to John Sayers, 3 00

CUT FLOWERS.

For the best display of all kinds, to R. P. Resor, 5 00

DESIGNS.

For the best design, to Richard Davies, gardener to R. P. Resor, for his model of an English Flower Garden, a silver cup worth 25 00
For the second best design, to Mrs. Wm. Heaver, for her Model Castle and ornamental grounds attached, a silver cup worth 15 00
For the third best design, to the Misses Orange, for the Buckeye welcome, a silver cup worth 10 00

For a Floral Temple, to John Sayers, a gratuity of	8 00	For the best display of Bouquets, to Thomas Knott,	5 00
For a Floral Temple, to Edward Kelly, gardener to R. B. Bowler, a gratuity of	8 00	For the second best, to Wm. Heaver,	3 00
For Floral Harps, to Mrs. McFadden, a gratuity of	8 00	For a good display of large Bouquets, to Robert Neale, a gratuity of	5 00
For Cottage and Grounds, to Miss Rebecca Orange, a gratuity of	5 00	For the best pair of Grass Bouquets, to Miss Mary Hill,	3 00
For a Rustic Vase, to Miss Mary Orange, a gratuity of	2 00	For the second best, to Miss Rebecca Orange,	2 00
For a Bouquet Stand, to John and Isaac Jackson, a gratuity of	5 00	For a large Pyramid of Coxcombs, to H. B. Turrill, a gratuity of	2 00
For best Evergreen Wreath, not less than thirty feet long, to S. S. Jackson,	5 00	For display of Coxcombs, to W. Evans, Lexington, Ky., a gratuity of	3 00
For the second best, to M. McWilliams,	3 00	To Mrs. Sleath, Mrs. McAvoy and Miss Lovell, for their valuable assistance in decorating the Hall and making Bouquets, etc., a gratuity for each of	5 00
For Hoop Wreaths, to the little Misses Jackson,	2 00	J. C. FERRIS, D. McAVOY, R. NEALE, HENRY IVES, <i>Judges.</i>	
For Evergreen Wreath and Grass Bouquets, a gratuity, to the children of the Scarlet Oaks—Jane, Elizabeth, and Reuben Warder,	3 00	Additional Articles, Omissions and Corrections.	
For a Temple of Flora, to George Brooks, a gratuity of	3 00	The list of Peaches is incomplete—those from D. McAvoy, of the Garden of Eden, having been omitted; they were Crawford's late, Smock free, Late Heath, Oldmixon cling, Penn's yellow, Late Admirable.	
For a Pyramid of Dahlias, to J. C. Ferris,	5 00	Dr. WM. B. CHAPMAN, when questioned about his orchard that furnished the "great show of Apples," credited to him on page 70, disclaims the honor, and we suppose it due to WM. CHAPMAN, of Linnwood.	
For two Rustic Vases, with Plants, to Richard Davies,	8 00	In the List of Apples no mention is made of a very fine display from SAMUEL LANE, of Clermont county—for which a Diploma was awarded to him, though his name was by some means also omitted from the list on page 71.	
For a Cornucopia, to F. G. Carey,	2 00	Specimens of Wine were brought in by R. BUCHANAN, GOTLEIB MYERS, R. SHOEMAKER, and JOHN WILLIAMSON.	
For the best pair of Moss Vases, not less than thirty inches high, to Wm. Evans, gardener to Wm. Resor,	10 00	H. NASH produced some of his celebrated Cider and Cider Vinegar, and pure drinking Water was furnished by one of LANING's Filterers. Diplomas were awarded to H. NASH, and to J. B. LANING, for their contributions.	
For the best pair of Moss Vases not less than twenty inches high, to John Sayers,	5 00		
For two Moss Vases, (not arranged in time for the award of premiums,) to S. S. Jackson,	5 00		

BOUQUETS.

For the best pair of Bouquets twelve inches high, to R. P. Resor,	6 00		
For the second best pair twelve inch Bouquets, to Wm. Heaver,	4 00		
For the best pair of Parlor Bouquets nine inches high, to Wm. Resor,	5 00		
For the second best do, to J. C. Ferris,	3 00		
For the best pair Hand Bouquets, to John and Isaac Jackson,	5 00		
For the second best, to John Sayers,	3 00		
For the best pair Flat Bouquets, to Wm. Heaver,	3 00		

PRESENTATION AND ADDRESS.

ON Friday evening, October 4, an immense concourse of people being assembled in the Hall to witness the exhibition and hear the address, the President, Mr. A. H. EARNST, called the meeting to order and addressed Mr. N. LONGWORTH, as follows:

"Venerable Sir!—I speak to you in the name of this Society; I hold in my hand a beautifully wrought goblet, the object of which is fully expressed by the brief inscription it bears:

PRESENTED

Through the Cincinnati Horticultural Society,
TO NICHOLAS LONGWORTH,
For his Eminent Exertions in Horticulture,
BY A FRIEND TO THE CAUSE,
1850.

"It is unnecessary, sir, that I should speak of the gratification the Society feels in being the medium to convey to you so just a tribute to merit. Upward of half a century of your life has been devoted to the *science of Horticulture*. More than forty years, myself have been a personal observer of your devotion to the garden. It is to you that we are indebted as to the pioneer, in the introduction of the finer fruits from other climes, for the display around us. Driven by the encroachments of city improvements from place to place, yet remaining firm, with renewed attachments to your *first love*, we have seen you on your knees in the new locations to which you were driven, inserting the *graft* or preparing the ground for the reception of the tender *plant*. Having grown old in *years*, and the *practical duties* of the *profession*, I ask you to accept this mark of respect, and I tender you with it the sincere wishes of your brother members that your remaining years among us may be the happiest of your life, and when the summons shall come to you to depart, that your journey may be to that GARDEN where perpetual *spring* and *peace* ever abound."

Mr. LONGWORTH, after receiving the cup, was loudly called on by the assembly for a response; with this he complied in a few brief remarks. He was evidently much affected by this unexpected mark of respect. He said he came to this place from New Jersey, a poor

boy, without patronage, but was kindly taken by the hand by Jacob Burnet, in whose office he studied law without charge. That he had always a strong passion for Horticulture, to which he had devoted all his spare time. Especially had he taken a deep interest in the introduction and culture of the vine, and he hoped to live to prove that wine of the best quality can be made here. He was aware that some good temperance people feel fearful of its influence, but he had no fears, as it was well known that in wine countries there is little intemperance compared with countries where the wine was not grown.

ADDRESS BY E. D. MANSFIELD, ESQ.

Then the President introduced Mr. MANSFIELD to the company, who delivered the following beautiful and interesting address to a delighted assembly.

Ladies and Gentlemen:—Your presence this evening, for the purposes of this meeting is strong evidence of the highest civilization. Man—primitive man in his state of innocence, and therefore, of perfection, was made and lived a GARDENER. He was a gardener of the highest knowledge, for he knew the quality of every plant that grew within his large domain. His garden was one of superlative excellence. Every tree pleasant to the eye or good for fruit was there. The plants greened in perpetual foliage; the flowers bloomed in perennial glory; the streams flowed in pure waters; the air breathed spicy odors; the birds made every grove melodious with songs; the sun sent down mild and cheerful beams; the heavens were clothed in roseate hues! All nature smiled, and the God of Nature filled it with the glory of his presence!

The scene changed, and man became a wanderer. He ceased to be a Gardener, and lost the dominion of the plants. The forest frowned at his approach. The flowers hung their heads and wept. The fruit withered on its branches. The waters became a mirage. The clouds darkened above him, and nature sighing gave signs of woe!

Man became a barbarian, and with the

garden, lost also the dominion. The prairie flower, indeed, bloomed. The wild rose might be found among wilder woods; and the fruits lay scattered among the leaves; but no kindly hand cultivated their beauties; no genial heart acknowledged the virtues, no poet's high minstrelsy sung the melodies of that music which warbles through the groves, which breathes in the plants, and is chanted in the skies! The genius of Poetry, like the Angel of the Lord drove Man, the Wanderer, from his native garden. She seized the woods and gave them to the Dryades, the waters to the Naiades, the flowers to Flora, and the fruits to Pomona. She filled the earth with Genii and Fairies; peopling it with the creatures of Ideality, formed in the dreams of a high and glorious Imagination!

The scene again changed. Man becomes a laborer, and through long ages of toil, darkness, and dismay, seeks his way back to the lost garden of his youth! The way is toilsome, but it is sure; at each turn in the path he discovers new beauties; the plants begin to return and court his hand; the fruits begin to mellow and ripen; the light begins to fall gently through the forest verdure; Genii and Fairies disappear at the approach of day, and man—civilized man—resumes his empire over nature, while nature's God, leads him by green fields and pure waters, to the long lost and much loved Garden of his hopes!

Such, Ladies and Gentlemen, is the progress of civilization briefly pictured. You see that it is imaged and figured forth in the delightful occupation of Horticulture; the primitive and the happiest vocation of man. Let me sketch to you some of the intimate relations which the growth of Horticulture bears to the growth and progress of man:

1. Horticulture does not exist till society has made a certain progress, and then the extent to which flowers and fruits are cultivated, and their variety depends upon the measure of advancement in society. Thus the Greeks and Romans, possessing the highest civilization of antiquity, cultivated gardens; but we have no evidence that the Greeks and Romans ever cultivated *foreign* plants; that is, naturalized, improved and multiplied the varieties, imported from foreign countries! This, however, makes the largest part of modern gardening, and thus proves the existence of a higher measure of civilization.

So, also, in modern times—it was not till the middle ages were past—till society was improved—till commerce was extended—and Mind, itself, was expanded, that Horticulture took its place among the arts. Among the first gardeners noted in Europe, were the Robins, gardeners to Henry the Fourth of France.

In England, the origin of Horticulture cannot be traced; but no gardens of any importance were known before the time of Henry the VIII. The best fruits then extant, especially apples and pears, were supposed to have been introduced by the ecclesiastics, in the days of monastic splendor.—Queen Elizabeth was said, by a poet, to have been both a horticulturist and a florist.

The first general book of gardening, in England, was published by a gardener of Charles the I., by which it appears that cauliflowers and celery were great rarities; that potatoes were just begun to be used and that artichokes were called potatoes, and in common use. In the seventeenth century, the celebrated John Evelyn, appeared as the promoter of horticulture, and made an era in that art. From that time forth, Horticulture, in all its branches, has made what may be called one of the Fine Arts of business, growing wherever there was wealth to encourage, or, taste to appreciate its charms and excellences.

I need not mention any other facts upon this head. Horticulture has advanced with society, and been kindred with all that adorns, refines, and sustains the structure of an elegant, as well as solid society.

2. We may next observe, that Horticulture, and its products, form one of the elements of Commerce, and that, too, not the least interesting. Few would guess—and yet it is a fact, that a flower caused one of the most remarkable instances of commercial speculation, which was ever recorded. As extreme cases test a principle, we may take this as an example of what a flower can do. I allude to the Tulip Mania, which prevailed in Europe, in the seventeenth century, nearly as strong as the Lind Mania now in New York. The Tulip grew wild in Turkey, Syria and Arabia. The early blowing kinds were brought to Constantinople, from Caval, a town on the coast of Macedonia. The late blowing kinds were brought from Cafer, in the

Crimea. It was introduced into Italy and Germany in the middle of the sixteenth century, and first appeared in France at the beginning of the seventeenth. When this flower became known, the Dutch merchants sent to Constantinople for different kinds; and notwithstanding they are exceeded in beauty by many other plants, they became in 1634, the objects of a trade, such as is not to be met with in history, and by which their price rose above that of the precious metals! This trade occurred chiefly in the cities of Holland, Amsterdam, Leyden, Haarlem, and Rotterdam.

As in other cases of speculation the price rose from day to day, without any regard to the use or even possession of the article.—Lands, and houses, sheep and oxen were bartered for Tulips! The scenes which occurred are beyond the dreams of imagination. Dozens of oxen, acres of land, and thousands of houses, were paid for single tulip roots!

A species called the *Semper Augustus* was often sold for 2,000 florins, and at that time there were but two roots to be had—one in Amsterdam and one in Haarlem! For a single root of that species it was contracted to give 4,600 florins, with a new carriage, two grey horses and a complete harness! The mania of Tulip speculation seized all ranks and conditions of people. Noblemen and citizens, merchants, mechanics, farmers, seamen, chimney sweeps, footmen and maid servants, all joined the grand caravan of speculators in Tulips. At first every body won, and nobody lost. One man was said to have made 60,000 florins in four months!—Some of the poorest people won houses, coaches and horses. Taverns were selected as places of change, where high and low traded in flowers, and ended the bargain with a sumptuous entertainment! Thus the trade in Tulips became in Holland a splendid species of gambling—very much like the stock jobbing of the present day. It ended, like all such speculations, in equally splendid bankruptcy! When the prices began to fall, no contract could be fulfilled. The Tulip dealers called a convention at Amsterdam, and declared that all contracts made prior to November, 1636, were null and void; and that all contracts made after that day should be free by the payment of 10 per cent. So that you see, Repudiation is not an American invention! No more honest

people lived on earth than the people of Holland, yet their sense of justice, like the civil law, declared that gambling contracts, under all circumstances, are *void*.

But let that pass, and let us again turn to the flowers. There was, in fact, a *real* tulip mania among flower lovers for some species. High prices were paid for some kinds. It is said that a Dutch merchant gave a herring to a sailor who brought him some goods. The sailor saw some tulip roots lying in the counting room, which he took to be onions, and ate a couple with his herring for breakfast!—When the merchant saw the mischief, he said with a woful countenance. "That sailor's breakfast has cost me more than to have entertained the Prince of Orange!" In 1769 the price of favorite Tulip roots in England was about eleven or twelve dollars each—a rather expensive flower.

The speculative mania passed away, as all epidemic manias do. But the healthy demand for the best species of flowers continues, and grows from year to year throughout the world. An extensive traffic in bulbous roots has been carried on in Holland down to the present day; and different varieties of both fruits and flowers are exported and imported in every civilized country. In a country so various and extensive as our own, the trade in fruit trees has become one of considerable importance. The sale and export of grafted fruit trees from the great nurseries to the new States and new orchards, can only be counted by millions of plants.

The annual value of the product of Horticulture in this country now amounts to nearly five millions of dollars, while that of orchards probably exceeds ten millions. But there is another and yet more pleasant aspect in which to view the commerce in plants. There is a value in a flower or fruit which can not be estimated in money. It is found in that beauty which exceeds all price; in those odors which breathe fragrance; and in that luscious and delicate taste which nothing but the products of the garden can ever yield. The Heathen Poets talked of the nectar banded round the tables of Olympus, and the Golden Apples in the Garden of the Hesperides; but this only proved that they had never seen the Pippins, the Grapes or the Roses of this Western World. The Poet who has seen the fruits in a modern garden, will never try his art in calling upon

imagination for what imagination can not equal!

The part of commerce which is thus above fixed, and to which I now allude, is the trade in *bouquets*, or culled flowers, as the ornament of dress, or rooms. There is not a modern city, in which the sale of flowers is not quite extensive. There is hardly a lady who does not wear them, and hardly a gentleman who does not really or professedly pay homage to the refined taste, which has thus associated the graces of her person with the loveliness of flowers! The trade in this branch of Horticulture is rapidly increasing,—and of all the fashions to which luxury has given rise, this is one of the most innocent, and the most to be commended. In spite of all the artificiality of civic life, there is something in this association, which calls us back to the bloom and beauty of primitive creation!

Another branch of the commerce in flowers is also extensive. It is that in flower roots, or green house plants, generally sold for private houses. The multiplication of these plants, at a cheap rate, has enabled even the poorest families to enjoy the sight and fragrance of the finest flowers. The numerous varieties of the Roses and Geraniums have been scattered broad-cast throughout the country. In this city, the taste has been diffused in a remarkable degree. Oftentimes, when not a foot of spare ground can be discovered round the dwelling of the Laborer, you may see on the little window sills, flowers whose hues and freshness strongly contrast with the arid destitution of walls and pavements. Thus without estimating to all, that most useful and most pleasant traffic which fills our markets with the most nutritious vegetables, and the most luscious fruits, we may yet find Horticulture ministering through the channels of commerce, to the most refined and delicate tastes of society; *TASTES*, which take from the labor of life its roughness—which cast a smile even on the dark mantle of adversity, which cheer the dull senses of care, and lead the soul, by the association of beautiful images, up to a happier and more gladsome world!

3. We may next note that the Migration of Plants has accompanied the Migration of Civilized Man. This diffusion and naturalization of plants, native to one land in other lands, is evidence that man himself has emigrated, and that in that colonization he has

become improved and civilized. It is remarkable how completely parallel is the case of the Vegetable Race, with the Human Race, in this mode of improvement. One may think that it is natural for any man, in going from one country to another, to take, as far as possible, the species of plants to which he is accustomed, with him. But, it is not so. Savage man never does it; and even semi-civilized men do not. It is only when communities advanced in intelligence, have great commerce—and by industry have accumulated the means of gratifying their tastes, that they have transplanted the members of the vegetable kingdom,—naturalized them in new soil—and collected in great gardens vast numbers and varieties. Thus the migration and improvement of the plant becomes conclusive evidence of the migration and improvement of man. The process of improvement is not very different. Labor—care—culture—training—engrafting—nourishing, and pruning—are necessary to both. The wild olive and the wild man require the same diligence in training before they can reach excellence.

If one could write the history of the migration of plants, even in modern ages, it would be one of the most surprising, instructive and entertaining chapters ever written. It would show the fruit and flowers emerging, like man himself, from Central Asia—following the Euphrates, the coasts of Arabia, and the sites of the sea—pursuing the footsteps of civilization—taking new hues in new climes—and, like man, improved by colonization and by culture. We should see in a later period, the New world rendering back its tribute to the Old. We should find the plants and flowers which were native of the Potomac, the Mississippi, and the Amazon, filling the gardens of Europe with new bloom, and feeding millions, who, but for them, could never have lived! And we may see, in this returning tide of products from the New World, a symbolical representation of that tide of light and liberty which shall flow from this western continent to the land of the orient.

Let us notice, as an illustration of this principle, the migration of some of the most known plants. To begin with flowers:

The Tube Rose was brought from the East Indies, where it grows wild in Java and Ceylon. The full Tube Roses were first raised from seed at Leyden, and have since formed quite

an article of traffic. The Crown Imperial was brought, in the sixteenth century, from Persia to Constantinople, carried thence to Vienna, and dispersed over Europe. The Persian Lily, nearly related to it, was brought from Suza to Constantinople.

The African and French Marigolds were supposed to have been brought from Africa in the time of Charles V., but are really natives of Peru, in South America.

The Guernsey Lily was brought from Japan. A ship returning from Japan was wrecked on the coast of Guernsey, where the bulbs took root, and whence it bears its name.

Of the numerous genus of the *Ranunculus*, there are said to be more than a thousand different kinds; but the principal part of them, and those most esteemed, were brought from Asia. This emigration took place at the time of the crusades. They were sent to Constantinople by the officers of the Sultan; from whence they were carried to Marseilles, and dispersed over Europe.

The *Amaryllis Formosissima* came from South America, whence it was brought by De Tover, a physician, and there it was subsequently found to be indigenous. I might continue this list of emigrant flowers to an indefinite extent, and in every country of high civilization, the foreign flowers will probably be found the most numerous. In this country we are deeply indebted to the Southern portion of this continent. Unless I am mistaken, some of the finest modern flowers exhibited here have come from South America. Of the numerous family of the *Cacti*, the finest have originated in Mexico, Guatemala, and the Central provinces. Over a great part of that country they seem to be the dominant plant, covering vast plains of little fertility. On the Northern rim of the territory in which this plant is indigenous, it is unseemly and unpretending, but under the warm sun of the tropics it bursts forth into one of the most various, brilliant and curious flowers which has ever been given to man.

Let us turn from flowers to fruits. The Apricot is a native of Armenia.

The Plum, although found wild in this country, is supposed to have originated in Asia. One variety, the *Damascene*, took its name from Damascus, the Syrian city.

The Peach is a native of Persia; whence it spread over Europe and this country.

The Nectarine is also a native of Persia, introduced into England in the sixteenth century.

Cherries are said to come from Cerasus, a city of Pontus; whence Lucullus brought them, after the Mithridatic War. They extended wherever the Romans spread their arms, and were introduced into England in the first century.

The Mulberry is a native of Persia, whence it was introduced into Europe about the sixteenth century.

The Apple, Quince and Vine, are natives of many countries, and it is not known that they belong specially to any one. This review, however, shows that some of the finest, and most delicious of all our fruits, originated in Persia, Armenia, and other parts of Asia; whence they have been transplanted, naturalized, and improved by culture, under the auspices of civilization.

Let us look a little further into the more important branches of Agriculture. How stands the origin and propagation of the Grains and Grasses, by which men and animals are sustained?

Prior to the fifteenth century, Barley and Wheat were almost the only grains in use through Europe, or even Asia. All of the most important articles of vegetable food known to our day, were unknown prior to the sixteenth century. The Maize, or Indian Corn, is a native of America, unknown to Europe or Asia, till introduced from this country; yet, in the course of two or three centuries, it has been introduced throughout the old world, wherever the climate is not too cold. The Potato is another article of vegetable food originating in America, and probably the most universal article of food used.

Buckwheat is a native of northern Asia, and is not a cereal plant, although classed among them. It was introduced into France, in the sixteenth century, and soon became the food of the common people. I need not add other illustrations of the principle—that the migration of plants has attended the migration of men—and, like that of men, has improved their condition, and been one of the means of advancing civilization. It is a beautiful law of social nature, that Man, the Wanderer, in his struggle for a better condition—in his labor for subsistence—in his search after higher pleasure—in his very exile from the lost Gar-

den, *diffuses* in all regions, by his labors, the blessings of a benign Providence—brings out the order of universal creation, and chants the sweet music of universal harmony.

4. The connections of Horticulture, or, rather, of the vegetable kingdom, with *Science*, are such as to improve the human mind, and thus improve society.

If we were to search for a subject of science which admitted of the widest range and the greatest variety, we shall find it in vegetation. There is an obvious, and sufficient reason for such a fact. Vegetation is the support of all life, whether of men, animals or insects. It must, therefore, pervade the whole earth, and be capable of infinite variety. The forms and quantities of mathematics can only be reasoned upon by men. Chemical affinities can only be understood and used by men. The metals can only be employed by men; but every insect must have its plants to feed upon, every species of cattle must have their grass to browse, and man himself must eat bread made from the grain of the field. All living nature lives and breathes on the bounties of vegetation. Hence it is so wide in extent and various in kind.

When Science comes to search for materials in this world of manifold nature, it finds an exhaustless source of instruction, amusement and delight! Look at the vast number of objects and distinctions. In turning over the pages of the "Journal of Science and the Arts," I find an account of the genus of flowers called *Amaryllis*, and the catalogue of varieties occupied thirty pages! Hundreds of varieties of *Roses* have been exhibited before this Society. Humboldt, in an Essay on the Grasses, says, that the three families of that plant contain two thousand two hundred kinds! Such is the vast number of distinctions to be defined, presented by the vegetable world to the eye of Science!

Look next to the modes of dissemination, the fecundity, and the growth of plants. They are carried over the earth in every conceivable way. Their seeds are borne on the winds, they float on the waters, they are carried by birds, they are transported in ships, they are imbedded in ice, they float invisible in the air. In fine, there is no walking, flying, creeping thing upon the earth, nor air, nor substance, which does not convey the seeds of plants. Some are propagated by roots, some by shoots,

some by fibres, and some seeds are furnished with wings upon which to fly away to their destined places! Cocoa Nuts and other fruits of tropical regions, have been found on the coast of Norway, in a condition to vegetate did the climate permit. Fruits brought by the sea have discovered the existence of islands which were unknown. By such means Columbus was apprized that he was not far distant from the land, whose existence he predicted.

Observe the prodigious *fecundity* of plants. Sir Kenelm Digby says that the Fathers of the Congregation of La Doctrine at Paris, had in their possession about the year 1660 a single barley plant with 45 straws, producing in the aggregate 18,000 ears of Barley. Ray counted 32,000 seeds in the head of one plant of Poppy, and 360,000 on one Tobacco plant. It is told of an Elm, that it produced 529,000 seeds. Yet none of these vegetables are among those of foremost rank in the degree of fecundity. The number of seeds borne by a plant of Vanilla, and above all by a Fern, confounds all calculation.

The *duration* of the germinating faculty of some seeds is almost incredible. Barley has grown when planted 140 years after it was gathered. Wheat, taken from the catacombs of Egypt, and which probably grew in the time of the Pharaohs, has been sown, sprung up, and began its life anew, thousands of years after it was ripened and gathered.

The *nutrition* of plants, involving their anatomy and physiology, presents another rich subject to the student of Science. The critical analysis of their composition shows them to be filled with fibres and vessels almost as numerous as the bones, sinews and blood vessels of the human body. Some derive their sole sustenance from the earth, some from the air, and some from the water, while others again live on all of these. Some seem self-dependent, while others creep round the bodies of their strong companions, and seem to live on their substance—parasites, who sometimes find their like among men. In one word, all life depends on vegetation, which, in its turn, seems to draw sustenance from every element of Nature—from the air above, from the earth beneath, and from the waters under the earth.

But, so in its turn, Death follows upon life, in the vegetable, as well as the animal world. The leafy forest, the verdant shrubs, the bloom-

ing flowers, each lofty tree, each humble plant, must bow their heads, and lay their honors low. Nothing lives on this earth exempt from the doom of mortality!

The mighty Cypress upon the steeps of Mexico, which, in its youth, saw the conquering arms of Cortez, and in its age witnessed the equally victorious march of Scott, will soon fall in its place, and return its glory to the dust! The lofty Palm, which looked down upon the gallant crusaders and has survived the Imperial Eagle of Napoleon, must also soon perish and cease to record in its annual growth, the passage of age to age!

Some plants live like the butterfly, but for a day; while others green and grow, and strengthen from century to century; but *all* at last die. There is not a flower, not a fruit tree, not a shrub, nor a forest oak, that has not its appointed period of time. You say, often, that disease or insects have infected the trees, but there comes a time when they will perish, though no disease or insect come near them.

Their deaths, too, are various. Some gentle flowers breathe out their life, and are gone, like the spirit of some infant child, ascending on the zephyr, to its home in heaven! Some have remained the summer, and enjoyed the companionship of their friends in the garden, till an untimely frost sends them to the tomb! Another, like the monarch oak, through whose head the winds of a hundred winters have whistled, breaks, crashes, and in its fall, thunders through the forest! It has fallen, perhaps, as it grew, upon one of those ancient monuments of the ancient people of this country, which survive memory and tradition!—There is the grave of a family, the tomb of a nation, and the last remains of a tree, which grew, lived, and perished upon the last remains of that people.

But, from this scene, how beautiful is the transition! From Death rises Life! The grain of wheat is not quickened, except it perish. The earth is not fertilized, till these its children shall mingle their dust with its own. The bloom of flowers, the foliage of plants, the trunks of trees, have gone forth into the elements, like ministering Spirits, in the work of a new Creation! Man himself, in his wanderings, has returned to repopulate the land! New nations, new trees, new fruits, new flowers, have come to magnify and glorify the face

of nature, with far more than its original magnificence; and you, *Ladies and Gentlemen*, have come to testify to this revival of civilization;—to this return of Man the Gardener;—to this Universal Harmony of the works of God!

I have noticed the connection of Horticulture with the rise of Civilization. Let us note, in the reverse, the stormy passions of man, destroying both Civilization and Horticulture. *VEGETATION*, in its relation to ourselves, is subjected in a certain degree to the control of man in society, and thus becomes the great agent of nature, in producing his prosperity or his misery. But how many countries of the earth, once fertile and beautiful in all its natural products have been made barren, by the ambition of rulers, and the ignorance of the people! "Recollect," says a writer, "what Asia Minor, Judea, Egypt, the provinces around the foot of Mt. Atlas have been, and behold what they are! Recollect Greece, once the land of science and of liberty, so totally sunk in ignorance, and recognized only in her ruins and the monuments of her dead! Man denied his labor to the earth, and the earth refused her treasures to man. All vanished with agriculture! The traveler, who, but a few years since passed that country once so renowned, found in the place of the fine forests that crowned its mountains, or the rich harvests once reaped by twenty busy nations, only naked and sterile sands and miserable villages! You may seek in vain, for several rivers recorded in history! They are gone! The same fierce storm of conquest which overturned cities, brought back barbarism, by drying up the springs from which the riches of the earth have flowed!" Egypt, which had supplied the Eternal City with bread, in the time of Augustus, has for fifteen centuries been scarcely able to feed the indolent Turk, who has encamped in the land of Pharaohs! *PALESTINE*, once flowing with milk and honey, now scarcely sustains the wandering Arab!

LADIES AND GENTLEMEN of the Horticultural Society, your office is not to destroy, but to plant. You come not as warriors driving the ploughshare of ruin, but as *gentle-ladies* and *gentle-men*, taking from the earth its blessings only to bestow them on society—strewn kindness in your path—harmonizing and civilizing the rough masses of mankind by

means which Heaven ordained, and Heaven continues to prosper.

It is your office to gather the bloom of flowers, the perfume of fruits, the odor of spices, and every beautiful and delightful plant, and make them the common property of common society. It is an office of humanity. It is an office of refinement, of honor, and of usefulness. It has already produced great and happy changes on the face of cultivated nature.

Allow me to notice, for a moment, some of the changes which this region has recently undergone. My age is not very great, and yet I can remember to have seen the wild deer within the present suburbs of the city, and heard the wolf's long howls from the neighboring hills! I need not state how vast has been the change in population, in buildings and in civic institutions, since the deer and the wolf have disappeared. That is obvious. The change in the arts of society have, however, been vastly greater. The steamboat has since replaced the keel boat, upon which I floated down the Ohio, and McAdam turnpikes have replaced the mud hole, and the corduroy bridge; and now the railroad comes to surpass all other means of locomotion!—But greater and better than these, the Mechanic Arts have risen here and attained the highest degree of excellence.

And last, the greatest of all arts—Agriculture, has improved and prospered, at such a rapid rate, that this, the new and forest State, has become the first State of the American Union, in the aggregate of its agricultural productions.

Last of all, the Fine Arts have come. Painters, poets, sculptors, and not least, Horticulturists have come, each in his turn, to erect the Corinthian columns of the solid and stately structure of Society.

Of the changes produced by improved Horticulture, I can speak of but two or three, which have been plainly visible in the progress of events. We have had in this vicinity, three distinct periods in the history of fruits and of flowers. The *first* was that of Pioneers. The first settlers of the Miami country were generally very intelligent people, and many of them from New Jersey—a State quite remarkable for the culture of fruit. Being lovers of so good a thing and knowing what it was, the gardens of the Pioneers

nearly all contained the best varieties of fruit, and very often fine flowers. Horticulture was not then a social and studied art, but it was cherished by individuals to please their own taste. The *second* period was when most of this fine fruit, either by neglect or disease, had perished. When the village of Cincinnati got to be a large town, market gardening commenced—vegetables at once became abundant and good. But fruit trees can not be replaced in a day. New trees were indeed coming on, but it was long before they produced well. In this period, there was a complete *dearth* of good fruit, a dearth, I mean, in regard to the demands of the people.

The *third* period is the present; when the trees begin to bear well; when the minor fruits are extensively cultivated in gardens; when the market affords a remunerating price, and when the Horticultural Society has begun to infuse new zeal into the lovers of the garden, and form the public taste in what regards the refined and beautiful in the products of nature!

We are now entering the era of high and finished civilization, in the use and culture of the earth; that era, figured forth, by Egypt and its irrigated fields, where Thebes and Memphis looked out upon the Nile; that era when Babylon overhung the Euphrates with hanging gardens. The era of Rome, with its Tivoli and Tusculanum; but the era to those who shall stand here of a far surpassing glory and magnificence! We shall build no monstrous pyramids upon the Ohio! We shall entomb no mummied Pharaohs! We shall erect no Baal altars to the god of Babylon! We shall enchain no captive nations, weeping for their native land! But, gardens will arise, in which the Angels of Eden may roam delighted! Fields, which produce more than Canaan with its milk and honey! Cities, which in all that is really admirable, will outvie the Thebes of the Nile and the Rome of the Tiber! It is less than half a century since this State had its birth, and already the dark form of Barbarism, retiring behind the western hills, is scarce visible on the distant horizon! The race of Pontiac and Little Turtle has disappeared! Soon the last oak which falls, resounding on the tomb of their ancestors, will make their last monody on earth!

A new race has come. A new creation is to be made. A new destiny is to be run. A

new glory is to be achieved. A stronger race, a better destiny, a higher glory, than was ever exhibited on the Nile, or the Euphrates; the Rhine, or on the Danube! Man, the Wanderer, is returning to his lost home! Man, the Laborer, is perfecting civilization; and Man, the Gardener, will soon build the house of a new and better Garden.

LADIES AND GENTLEMEN, of other States and other Societies;—We welcome you,—gladly and gratefully—to whatever hospitality our City can bestow. We welcome you to the pleasures of such a meeting. We welcome you as brethren of a Common Father! We welcome you to the present blessings and the glorious hopes of our common country! We rejoice with you in that great and unspeakable blessing,—a free—a happy—a Christian, a United Republic,—setting the example of Liberty and Justice to the long-darkened, and long-oppressed nations of the earth! Yesterday the Eagle of the Republic dipped one wing in the Atlantic; but to-day it bathes the other in the Pacific. Its empire is complete! From mountain to mountain; from ocean to ocean,—one great circle of kindred States and kindred Societies, bind together one great Nation,—one glorious Government,—one beloved Union!

If, in some delirious moment, some one should speak of breaking any of these cords of Union, we shall say, like Emma to her lover:

"No,—Henry—no!—One sacred oath has tied
Our Loves:—One destiny our Life shall guide,
Nor wild, nor deep our common way divide!"

Rules to Govern the Award of Premiums for Catawba Wines.

1. The committee shall consist of five members, who shall be disinterested, and shall have power, in case of the absence of any one or more of them, at the time of the exhibition, to appoint others, for the time being, to make the committee full.

2. The first premium shall be a silver cup, with a suitable inscription, not less than twenty-five dollars in value; the second, ten

dollars; and the third, five dollars, in money or plate.

3. The annual exhibition and examination of wines shall take place on the first Saturday of October, and the wines for competition shall have been made the year preceding the examination.

4. All persons wishing to compete for the prizes, shall notify the secretary in writing; stating the number of samples he intends to exhibit, and accompany his communication with one dollar for each sample.

5. There shall be a person appointed by the society, to procure the samples from the competitors, who shall be supplied by the secretary with bottles of a uniform size and appearance, as called for in the preceding article; and he shall be required to take the wine from the cask, (the casks to contain not less than thirty gallons,) seal them, and deliver them to the secretary, who shall number them and make a record of the same, in a book to be provided for that purpose, and in such a manner that the committee shall not know to whom the samples belong.

6. The committee shall award a gratuity for any wine manufactured in our vicinity, equal or superior to Catawba, from any new grape or any mixture of grapes.

7. All samples for competition must be handed to the secretary at least ten days previous to the examination.

ADDITIONAL RULE.

The secretary may also receive samples of wine of one bottle or more, taken from a smaller quantity than thirty gallons; and, if satisfied that they are of the previous year's vintage, the committee may award to them a diploma, certificate, or a money premium not exceeding five dollars, for any one sample, if meritorious; the notices to be handed to the secretary ten days previous to the examination.

RANDOM NOTES ON HORTICULTURE.

As your valuable Review is not, I presume, to be wholly devoted to the stomach, and entirely occupied in pointing out the most luscious fruits and appetizing esculents, a few remarks relative to the trees and shrubs of our country, and other matters therewith connected, may not be unacceptable to some of your readers. There are many persons desirous of beautifying and adorning their homes, who have neither the means nor the inclination to go to the expense of employing a learned arboriculturist to lay out and plant their grounds, or of purchasing the high-priced exotics that give such a charm to the mansions of the wealthy. They are ignorant, too, of the many treasures that lie on every side around them, easy of access; and some of them far more beautiful in every respect, than two-thirds of the fantastical products of distant countries, over which our Amateurs go into ecstasies as they triumphantly mouth their lengthy Latin names, as though they were rolling a delicious morsel under their tongues. Take, for instance, the *Martynia Fragrans*, so lately imported as something remarkable for its beauty, its very name redolant of odors. Place it, side by side, with our common Jamestown weed, and it would be difficult to decide which to retain, or root out and cast to the refuse pile of the garden. Nine out of ten would pronounce against the exotic, unless, indeed they were *savans*. It is nothing but a weed, at best, and though it may do for the parterre of the nabob, I advise the poor man to transfer it to his manure heap. We have richer treasures at home. Our fields and forests have materials sufficient in themselves to furnish a Paradise, and thousands would eagerly avail themselves of them, if they were only pointed out, who now content themselves with the meager Locust. I value as highly as any one can, the magnifi-

cent Cedars and stately Pines that are now being introduced; but at this time they are beyond the reach of the many, and will, perhaps for the next half century, be confined to the few. Yet without them, our beautiful hills and valleys may be made to glow with beauty. The humblest cot may be embowered in a wilderness of sweets, and our native trees and shrubs lend a charm equally grateful, as though they were of foreign growth and importation. Strange as it may seem, while we are hankering after weeds whose only merit is in their high-sounding names, and busily engaged in housing them in expensive conservatories, foreigners are, and have been for a century, employing scientific men to travel through our country to collect those very trees and shrubs as treasures, that we value so little, because they can be procured from our own woods and fields. As for myself, be it bad taste or not, I have reaped more true enjoyment in wandering through a grove of our exquisite Southern Magnolias, or even in a walk in Autumn through our Western forests, than in the hottest green house in the country, surrounded by the longest and hardest named vegetable "varmints" of the Tropics. A new hairy Cactus excites as much rapture in our amateurs, as a whiskered Hungarian or a mustachioed Frenchman does in the fluttering hearts of the young girls of a Boarding School. Though in its own country the one may be a weed, and the other a tailor or a dancing master.

The vegetable phenomenon comes over as a "Cactus Hairythornibulbissimus Elegantissimus." The Biped is either a Marquis or a Count—on *his* card. Divest them of their titles and the one would be no better than a skunk cabbage, and John Smith or Bill Brown be held a "properer fellow" than the other. I have no desire to disparage either. But I

trust that our Amateurs and Misses can find better things at home.

The wealthy, however, who devote their means and time to the introduction of rare and elegant exotics, are certainly deserving of all commendation. But at the same time their aim should be to avoid the ridiculous affectation, in this country so common, of valuing a plant solely for its foreign name and extraction. I have often been highly amused at the pompous variety of some of our rich amateurs as they dilated with rapture on the merits of plants, possessing not a grit of beauty, but which they had imported at an exorbitant price. To be sure, they had excellent Latin names; but either Greek or Choctaw would have answered the purpose, as in either case I should have asked in vain for a translation. But I would not abate their enjoyment in the least. It is better thus than that they should be employed in usury or speculation, though, in some cases, indeed, there is a combination of these. But I do desire that the Science of Horticulture should take a wider and more useful range, and neither be narrowed into the compass of a green house or a kitchen garden, nor be so wholly devoted to ends requiring vast means to accomplish. It may be right and proper to bestow a gratuity of a silver cup, or a premium in money to the wealthy proprietor of a collection of curious exotics. But the happiness of society, nor the comfort of the many, is not, in the slightest degree, promoted by it. What odors they shed, what beauty may belong to them, are enjoyed by the privileged few alone. The masses can have no share in their joy. The great aim of our Horticultural Societies should be to inspire in all classes a love for the beautiful. They should offer every inducement to those not able to imitate the luxuriance of the Tropics, to take advantage of the materials around them, to adorn and beautify their homes. They should

grant premiums to those who do so. They should encourage emulation in improving the cottage as well as the more costly mansion. A premium of one hundred dollars to the poor man who has excelled his neighbors, and to the extent of his means and knowledge improved his half acre, would be of more actual and profitable service to society, than ten thousand bestowed upon him who has imported and flowered all the Cacti in the Universe. Such rewards would cause our hills and our valleys to glow with the beautiful and elegant products of our own soil. Give a dollar to the man who has produced a twenty pound pumpkin, but give twenty to the cottager who has planted a tree for the sake of its beauty. While we are promoting and fostering a taste for the rare and exquisite fruits most tempting to the palate, let us also bestow some regard upon the higher and more refining influences of Horticulture. It is useless to comment upon the moral effect of a beautiful and highly ornamented home, when contrasted with a bare and desolate looking hovel.

Ten chances to one the children born and brought up in the first, will make useful and worthy members of society; while those of the latter will, sooner or later, perhaps find themselves in our jails or House of Refuge, or at least would be found there if they had their deserts, in three cases out of five. A handsome garden is worth a thousand homilies, in its effect upon the minds of youth. Its purifying influence is felt through life, and a love for plants and trees is deeper and more lasting, than we feel for every thing inanimate beside. In the heat and turmoil of the great battle of life, how fondly do we look back to the cool shades and refreshing streams that were the joy of our youth. Disappointed in his schemes of ambition, or worn out with the fret and fever of the world, man returns to nature for his solace, nor is that solace sought

in vain. For, in the language of Wordsworth, one of her truest poets,

"Nature never did betray
The heart that loved her: 'tis her privilege
Through all the years of this, our life, to lead
From joy to joy: for she can so inform
The mind that is within us, so impress
With quietness and beauty, and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men,
Nor greetings where no kindness is, nor all
The dreary intercourse of daily life,
Shall e'er prevail against us, or disturb
Our cheerful faith that all which we behold
Is full of blessings."

Nor does nature deny her privileges to those whom she has endowed with neither position nor wealth. Beneath the humble Hawthorn in the glen, as happy, aye, happier hearts may beat, than under the marble portico overshadowed by the graceful Deodar, or the towering Cedar of Lebanon. The noblest thought connected with the garden is, that it is open to all. It can contribute more than aught else to the happiness of the many. The violet, as it exhales its sweets, asks not the question, "art thou of the humble or the exalted?" The fragrant rose climbs to the window of the hut that shelters toil and penury, and its blush is not that of shame. We may, with pride and pleasure, accompany a stranger to view the magnificent array of exotics, that taste and wealth have gathered from all quarters of the globe; but surely it would be a far more grateful sight, if we could point out to him an array of vine embowered cottages and humble dwellings, displaying by the numerous trees and shrubs that surround them, that the march of refinement has not been wholly confined to the prosperous, but has extended its influence to all. Proud as the princely owner of the splendid domains of Chatsworth may be of his groves of costly trees, covering hundreds of acres; of his gushing fountains and roaring cataracts, all owing their existence to his munificence and taste,

yet the little village of Edensor, constructed by himself for his tenants, is the most beautiful and praiseworthy result of all his large expenditures. A stranger passing through it must feel, as he surveys the scene, that the beauty and comfort that he sees around must contribute largely to the happiness of its inhabitants. But if he were to pass through one of our western villages, his thoughts and feelings would be widely different.

In the New England States it is true many of the villages are models of elegance and taste, but who ever has had the ill fortune to tarry awhile in almost any of our smaller western towns, will have few pleasant recollections of his sojourn. Even our farm houses are, in most instances, execrable eye sores. The noble forest trees that once surrounded them are prostrated by the axe. A few stunted apple trees and a meager vegetable garden, are all that are considered necessary for comfort. Perhaps a few miserable Locusts may shade the unpainted porch, but rank weeds, and a general appearance of neglect too truly attest the utter lack of refinement that prevails among the most independent portion of our population. That there are exceptions, it is true, but a few hours ride in any direction will prove all I have stated. Throughout Europe the middle classes have little or no incentive to beautify their abodes, being held, (as most of them are) merely by a rent tenure, and by the time their improvements are beginning to be a source of pleasure, the occupants may be compelled to leave. Yet with this drawback, the taste displayed, particularly in England, by the humblest cottagers, is far greater than we see with us, even among those who may be considered affluent, and who are the sole proprietors of the soil they so shamefully neglect. This should not be; while we are striving to produce and foster a taste for the choice and delicate varieties of fruit, we should not forget, that though we

may, perhaps with propriety, do all we can to pamper the palate, yet that there may be quite as much pleasure afforded by the cultivation of a refined taste for trees and shrubs and flowers, as in filling the stomach to repletion with the most monstrous Bigarreau cherries or the most luscious pears of the day. The one is an animal, the other an intellectual indulgence. But it is needless to say that at present, in this region of country, nine out of ten would enjoy a more pleasurable sensation at seeing, smelling and tasting a melting, juicy peach, than in beholding the most gorgeous bloom of a parterre of roses or any other display, not connected with animal appetite. Now these tastes may be combined; men may be taught that nature can afford enjoyments and repasts not merely sensual. Horticultural Societies may do much, and a well conducted Journal may do more, toward refining and amending the popular taste. I do not despair yet of seeing the day, in this neighborhood at least, when men will be much prouder of beholding a stately tree overshadowing their dwellings, or an exquisitely lovely vine clambering to their casements, than even

of seeing a corpulent pumpkin or a mammoth squash shining out from the fat mold of their gardens. Nay, I believe it among the possibilities, that on visiting a neighbor in the country, he may attract attention to his fine collection of trees and shrubs on his neatly trimmed lawn, with as much zeal as he will now do to his pens, where his swine weighing two hundred pounds each, or more, are stirring up odors which, though quite congenial to his nostrils, are not by his guests, at all relished as those of the violet or the rose.

I have thrown off the foregoing random and desultory thoughts, not for the purpose of detracting from the merit of those who find their sole pleasure in rearing delicate exotics or in a display of vegetables and fruits, but with the hope that both by precept and example they will encourage a fondness and taste for matters not so costly in the procurement or so wholly sensual in their indulgence.

But I must conclude for the present. The subject has thrown out quite too long a leading shoot, so I will here nip it off, and perhaps some side branches may appear hereafter.

SYLVANUS.

From the Transactions of the Pennsylvania Horticultural Society.

ON THE CICADA SEPTENDECIM.

BY MARGARET H. MORRIS.

THIS destructive insect is not a true Locust, but derives its popular name (seventeen year Locust) from its fancied resemblance to the Locust of the East, which belongs to the family of grasshoppers, (*Locusta*).

The Cicada Septendecim appears in June every seventeen years. When they emerge from the ground they are grub-like in form, destitute of wings, and covered with a tough shell, a proper and convenient coat, that effectually protects them while in their earthy abode. The evening and early morning hours are best suited for them to undergo their change from the grub to the winged form, and accordingly as soon as the sun disappears,

they may be seen creeping from the earth in countless numbers, crawling to the nearest tree or shrub, which they climb until they reach a convenient spot to grasp firmly. There, with their heads always upward, they await the change, which begins by a slit opening in the back of the shell, and the fly gradually draws itself out, the body enlarges, the wings expand, and the creature assumes new life and energies, though it always continues heavy and sluggish. They live in the winged state about three weeks before they deposit their eggs, subsisting on dew and moisture found on the leaves of the trees. The female has a strong and curiously contrived piercer,

with which she carefully slits the bark of the twigs of trees and shrubs, and deposits her eggs in pairs, side by side, but separated by a portion of woody fiber, and placed obliquely so as to allow one end to point upward; from ten to twenty eggs are deposited in this slit. She then removes to a little distance, and makes a new nest; when a limb is sufficiently stocked, she removes to another, until her store of eggs is provided for, when she becomes exhausted, falls to the ground, and soon dies. One female will deposit four or five hundred eggs. The eggs require forty-two days to mature in the branches of the trees; they then burst the shell and appear a minute fac-simile of the parent in the larva state, requiring but a few moments to stretch their limbs and prepare for labor, before they unloose their hold of the twig on which they had been deposited, and fall to the ground, when they immediately disappear in search of food, which they find in the roots of the parent tree. When first hatched, they are very small and white, but soon change to a yellow brown. They exist in separate tribes, occupying a different section of country, making their appearance in different years, but invariably after the same interval of time. For a year or two before and after the appearance of the main body, a few scattered individuals will generally be found.

Their favorite trees appear to be the oaks and fruit trees in general, avoiding the Fir, Walnut and Hickory tribes, though they will occasionally deposit their eggs on them should no other tree be conveniently near at the proper moment.

From the roots of a Pear tree, four hundred and eighty of these insect larvæ were taken, fortunately in time to save the life of the tree; the roots were unhealthy, and bore the appearance of external injury arising from small punctures, and on removing the skin of the bark, this appearance increased, leaving no doubt as to the cause of the disease. The larvæ were enclosed in compact cells of earth, with no outlet except that in immediate contact with the roots.

Should a tree on which these larvæ have been feeding be cut down, the insects perish for want of food, and if carefully searched, the cells that had once been inhabited will be found either containing the decayed insects, or filled with earth that has gradually been

deposited by filtration, bearing strong evidence that these larvæ never leave the tree on which they were originally deposited.

M. H. MORRIS.

Germantown, June 17th.

Communication by Professor Henry Goadby, to Dr. R. Hare.

PHILADELPHIA, MAY 8TH, 1850.

My Dear Sir—On the occasion of a visit to Germantown, Miss Morris was kind enough to afford me an opportunity of investigating the habits of the Cicada Septendecim, or, as it is commonly called, the "seventeen year Locust."

For this purpose she directed the gardener to dig down to the roots of a Pear tree whose condition gave sufficient evidence, to her practiced eye, of the attacks of this vegetable vampire. We found an abundance of these insects attached to the various ramifications of the root, their rostrum (or beak) was deeply imbedded therein, by which means they are enabled lazily and constantly to feed upon the sap to the manifest destruction of the tree.

We then examined the roots of another tree with precisely the same result, finding, altogether, thirty-five specimens during my stay, and in every instance the insect was attached by its mouth to the root.

It is a somewhat remarkable fact in corroboration of the slow development of these insects, said to be due in the perfect or imago state next year, that all the specimens I saw and collected are in an incipient *pupa* condition.

Possessing what is termed in Entomology an "imperfect metamorphosis," these insects are the most destructive, as they feed incessantly during their entire *larval* and *pupal* conditions; a period which, if the commonly received opinion be correct, extends to *seventeen years*; during this long period, the unfortunate tree, on whose vitals they have affixed themselves, knows no respite, and year by year their gradually increasing size requires a greater supply of nutriment. The loss of valuable fruit trees due to the destructive propensities of this tree-bug must necessarily be considerable; fortunately, however, it is within the reach of every one to save his trees and do much to limit the number of this Cicada by simply exposing the roots in the

spring of the year, and collecting and destroying the grubs.

The lady, to whose intelligence and persevering industry the discovery of the habitat and instincts of this insect is solely due, Miss Morris, has set the example of relieving her trees from these persistent enemies, and she has succeeded, by this means alone, in saving some trees from threatened dissolution, and restored them all to that robust health by which they have been enabled to bear very large crops.

In the hope that this brief account may prove interesting to the members of the Horticultural Society, I beg to present it to them through you.

I am, my dear sir, very truly yours,
HENRY GOADBY, F. L. S.
PROFESSOR HARE, M. D.

Dr. Hare stated, in his communication to the committee, that in the spring of 1849 he accompanied Mr. Agassiz, the celebrated naturalist, to the garden of Mrs. Morris, at Ger-

mantown, and was present at an exploration made by him under the guidance of Miss Morris, and that he considered the impressions made upon Mr. Agassiz to be such as to confirm the statements of Mr. Goadby and Miss Morris, as far as there was an opportunity of judging, and that he was in hopes that the distinguished philosopher would, in the course of next summer, become master of the subject so far as to give his inferences to the scientific world.

Dr. Hare suggested that the best means of protecting the trees against this insect would be that of covering the whole of the ground under each tree with cheap cloth well painted over with tar; of course gas tar would be the cheapest and probably the most efficacious. He considered that this covering would intercept the grub as it falls from the tree on which it has been hatched. By instinct it seeks immediately to go into the soil. No tree can be attacked by insects that are not hatched upon it, as they are too feeble and small to travel from one tree to another.

THE FRONTISPIECE.

OUR frontispiece for this month is a view of the wine house of Messrs. Corneau & Son, located on their place at Latonia, in Kentucky, about four miles from this city; it is probably one of the most complete establishments of the kind in the country. The great and increasing interest that is felt, not only here, but in nearly all parts of the United States, in reference to the culture of the grape and the manufacture of wine, induces us to devote some space to this subject, particularly as the Vintage season is about over, and our *Vignerons* are now able to determine the result of their labors and skill. Improvements upon the methods and practice pursued during the earlier periods of the manufacture of Wine from the Catawba grape, are being made every year, and the result is that a very superior wine is now obtained from this grape, and one which bids fair to rival the most cele-

brated brands of the old country. The wines manufactured by the Messrs. Corneau, as well as by Messrs. Yeatman, Longworth, Buchanan and others, will not suffer in comparison with those which are imported in large quantities from the Rhine countries, but, on the contrary, are frequently preferred by those who have been most accustomed to the use of the Rhenish wines. Its perfect purity and mild tonic properties render it an important addition to our materia medica, and its use as a gentle and nourishing stimulant is prescribed by some of the most distinguished of our medical faculty. As a table wine it is probably without a rival; there are none more harmless or less liable to produce unpleasant effects; the cultivation of a taste for this wine has the advantage of creating a *distaste* for the use of stronger wines or spirituous liquors, and thus in fact may be made the

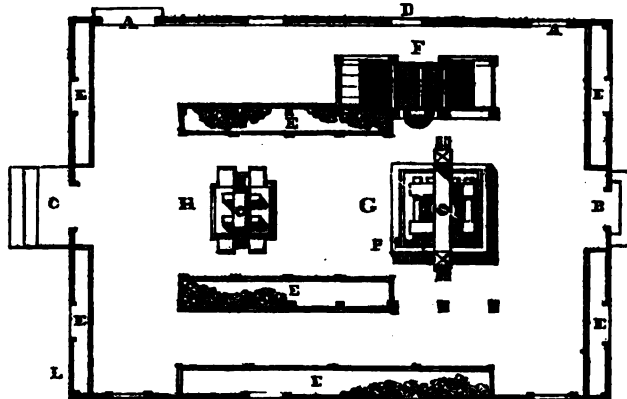
means of a reformation quite as salutary as the *tee total* efforts of some of our ultra temperance reformers.

One important improvement which has been successfully introduced by the Messrs. Corneau is *the stemming of the grape* by a very simple and rapid process, and which also increases the peculiar *aroma* or *bouquet* of the wine. Many attempts have been made to accomplish this result heretofore, but they have either failed entirely, or have been found impracticable for large crops; the method of the Messrs. Corneau is remarkable for its ra-

pidity; two men being able to stem, mash and place in the press near eighty bushels of grapes in about three hours. We understand that they intend introducing some further improvements during the next season, which will facilitate their operations to a greater extent than those which they now possess.

A sketch of the details of wine making as pursued at this establishment may not be uninteresting to our readers, and which will be readily understood by a reference to the accompanying cuts of the plan and arrangement of the wine house.

PLAN OF THE WINE HOUSE.



A. Door opening to the Vineyard by which the grapes are brought into the wine house.

B. Back door of wine house.

C. Front door of wine house.

D. Opening through which the stems are thrown from the machine.

E. Tables for picking over, and assorting the fruit previous to being stemmed.

F. Stemming and crushing apparatus.

G. Large press—capacity of one hundred bushels.

H. Small press—capacity of forty bushels.

L. Door opening into the basement.

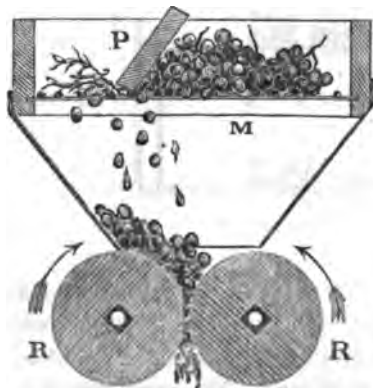
The following are the various operations of the manufacturing process, from the gathering of the grape to the bottling of the wine.

1. *Gathering*.—The grapes when fully ripe are gathered in baskets containing about a bushel, as well as in a sort of "pannier" of wood, made very light and strong, and which is supported by straps, or thongs of willow, on the back of the picker, as represented in the frontispiece; they are brought from the vineyard in this manner and thrown upon the picking tables where they are carefully assorted.

2. *Picking*.—This consists in removing by hand, all green, shriveled or decayed grapes, which are thrown into tubs or barrels and pressed separately, to make a common wine or vinegar. The finest grapes are carried thence to the stemming apparatus, where they undergo another operation.

3. *Stemming*.—Beside the improvement in the quality of the wine which this process imparts, there is another material advantage derived from it, which consists in the diminution of the bulk or volume of any given quantity of grapes in bunches. The large press of the Messrs. Corneau being capable of containing upward of an hundred bushels after the stems are removed; from which about four hundred gallons of wine may be obtained.

"Stemming" consists in separating the berries from the stem; it is done in *F.*, (of the ground plan) by means of the apparatus of which a wood cut is appended.



The grapes are thrown on the wire sieve *M.*, which is open enough to allow the berries to pass, but retains the stems; a little plank, *P.*, is held in an inclined position to which a backward and forward movement is given, so as to force the berries through the sieve, and to remove out of the way all the stems as they are stript; with the aid of this apparatus, two men can, in the course of three hours, if reg-

ularly supplied with grapes, stem from 70 to 80 bushels. Improvements might be made, by which the manual labor would be diminished; but this simple and cheap apparatus, which Mr. Corneau has introduced, is generally used by the wine manufacturers of France.

4. *Mashing*.—After passing through the stemming process the grapes fall into a wooden mill, consisting of two rollers ridged obliquely, to one of which is attached a set of screws by which their distance from each other may be graduated to the proper degree; it being desirable that *every grape* should be crushed but that the seed should not be broken.

The rollers are turned by hand; the above wood cut exhibits in *R. R.*, a section of these rollers, and that which follows shows two men, one stemming, the other mashing the grapes.



From the rollers, the grape (being entirely separated from the stem and thoroughly mashed) passes into the press, where the final operation of separating the juice is performed. The wine passes from the bed of the press by means of a conductor, into the basement, from whence it is conveyed into casks containing 260 gallons each; these, though by no means of so large a size as those used by some of our wine manufacturers, are of a very convenient capacity for ordinary crops. The first fermentation takes place immediately, and at the end of six or eight weeks the wine becomes

perfectly clear—or what is technically termed "*fine*"—a second fermentation takes place in the spring about the period of the blooming of the grape. The wine should not be bottled until it is *at least* one year old, though it is frequently bottled for immediate use, just previous to the second fermentation; this may be done with safety if the bottles can be kept in a very cool place. There are many who think the Catawba wine is better at this period than ever afterward.

The large press of the Messrs. Corneau was constructed by Mr. H. P. Gengembre of Paris, a gentleman of great scientific and artistic acquirements, and to whose pencil we are in-

debted for the sketch and drawings which form the subject of this notice.

The great degree of interest which attaches to this subject will induce us hereafter to give to our readers all the information in regard to it which we may be able to obtain. It will readily be conceded that Cincinnati and its vicinity will, in all probability, become the great head quarters of the wine manufacturing interests of this country, and being thus surrounded by all the practical as well as theoretical authorities on the subject, we shall be prepared to say all that is necessary to be said in reference to so important and interesting a matter.

MA - A N - G A .

A NEW DOUBLE PRAIRIE ROSE.

THE following extract from a letter was handed in for publication by one of our earliest and most zealous horticulturists, and the Editor is thankful to him for enabling him to welcome a communication from a fair correspondent in the further West, especially as it is the herald of the approach of another native Climbing Rose. The dried specimen sent in the letter appears very double and a compact head:

This is not the first instance of the Garden of Nature emulating the efforts of man to produce double flowers; we have already at least two of this very species, which were found double in their wild state, in our own neighborhood, the Montjoy multiflora, and Dr. Worthington, noticed in the first number of our Review, under the head of Prairie Roses. When shall we discover the secret of making double flowers? so much admired by florists, and so much despised by botanists,

The name *Ma-an-ga*, as proposed by the correspondent, should be adopted, were it

only to perpetuate a memento of the poor Wyandottes, who were induced to relinquish their beautiful reservation upon the plains of the Tymochtee, in our own state, where I have seen them enjoying their homes and the remnant of their native soil, with as much zest as any of their successors now do—so strong was their attachment to the soil, that it was supposed when I first saw them, that they would remain among us. They were, indeed, the last to depart from our borders, and it was a sad day to me, when they were leaving our port on the steamboats, crowded, sick and dispirited, and not as those who are seeking the land of promise. Alas! it has been a sorrowful change for them. Many have since died. Their number has been reduced two-fifths, or forty per cent., in the five years that have elapsed since they left Ohio.

Indian Territory, Wyandotte Agency, }
July the 15th, 1850. }

Maj. GANO: Knowing the interest you feel in the science of Horticulture, I have ta-

ken the liberty of inclosing a specimen of wild double Multiflora rose that grows in this country. It was discovered by a young Wyandotte girl, whose perception of the beautiful is a source of admiration to me. As I had never seen a double wild rose, and not recollecting that any were described in the books, I thought it might prove a valuable contribution to the flora of our country, and therefore determined to forward this specimen to you, and, if a new variety, through you present, to the Horticultural Society of Cincinnati, a rose bush in the spring, when it can be transplanted without hazard. I so much doubted its growing wild, that its graceful discoverer piloted me through the prairie to the spot three days ago. There, on the point of a ridge, in a space not more than 20 feet square, they were climbing over undergrowth making the wilderness indeed blossom like the rose; but to me its situation was most curious, from the fact of its being surrounded, on the declivity of the elevation, by a wilder-

ness of the single wild rose and pea vines. A lively imagination might fancy the ridge to be the burial place of some of the aborigines, thus decorated by pious hands long since moldered into dust.

Should this prove a new variety, I would be glad that it should perpetuate the name of its graceful discoverer *Teche Nehame Ma-an-ga*, which the United States interpreter tells me may be rendered into English, *The rose of Wyandotte*. Me-an-ga is an epithet of endearment, meaning bright looking. I called at her mother's cottage, and found their garden filled with beautiful wild flowers and flowering shrubs, collected by the daughter. One shrub with its long spikes of pale yellow flowers and graceful, fairy, locust like leaves was very pretty, but her hedge of wild roses excited most intense admiration. There is a cluster now lying before me, on which there are twenty full blown roses and eight buds; they have been in bloom since June 15.

MARY S. CLARKSON.

ROOT PRUNING PEACH TREES.—CURCULIO AGAIN.

THE reader's attention is especially directed to the subject of the first part of the following article. The writer is one of our most practical philosophers—no theorist—his suggestions are founded in such excellent good sense, that their trial is very desirable for those interested in the cultivation of the "*luscious peach*,"—and who is not so interested? In the first place, let us ask ourselves whether this cutting off a portion of the roots of a bearing tree will not be likely to produce the effect anticipated for the orchard, that was observed in the vinery; if so, and if no injurious effects follow, then it will be worthy of a trial. The best time to perform the operation remains to be settled by actual experiment—whether while the tree is still clothed with leaves, or even after they have all fallen. In our mild climate and open winters, a certain amount of circulation of the sap is carried on whenever the ground is not absolutely frozen, and it is well known that a good callus is

formed even in *cuttings* of roses and other woody plants, placed in the ground at any time during the winter, but more especially as the spring advances—how much more likely to occur in the cut roots of a standing tree! That the process will produce the effect of retarding the blossoms, there is no doubt; this has often been observed in transplanting trees. In 1849, the only plum tree on my place whose blossoms were not destroyed by the frost of May, was one which, having been moved that spring, did not bloom so early as the others. The retarding influence is well known to our nurserymen, who find great advantage to their business, in prolonging the hurried season of spring sales, by taking up and laying in by the roots, all the trees they expect to dispose of, as well as those they have to transplant.

If, then, it be true that the opening of the buds will be retarded by the root pruning, the chances of the success of the process are much

increased, and the trees thus treated will be placed in the same relation to the rest of the orchard, as that sustained by some apples that naturally bloom later than their fellows, and are notoriously certain bearers, among which the Rawle's Janet is familiar to all western orchardists as a sure crop, and very familiarly known through the country as the "never-fail."

Try the experiment upon some of your trees, and if the flower buds escape the effects of the nights we are to have this winter, when the mercury is to sink below zero, do give the editor an opportunity of laying the result before his readers, for the edification of all, and for the future benefit of the community.

The curculio story is *amusing and instructive*, as the publishers say of their story books—though this is a *history*, and to be taken as such—true, every word. It is instructive, showing, by additional evidence, that persevering efforts may result in the destruction of a great many of these pests, and until we know more about the habits of the insect, and the history of its subterranean life, its timidity makes it fall an easy prey to the watchful shaker. Hens I have never had much faith in, since witnessing the apparent disgust manifested by a group of Dorkings, to whom a handful of live curculios was offered by the amiable proprietor of a few nectarine trees which he had inclosed as a chicken yard, in the vain hope inspired by high recommendations from those who advocate the chicken theory and practice, Poulo-pathy, which has been as highly lauded as some other pathies that shall be nameless.

Neither the knockings of R. Buchanan, nor those of friend D. Thomas, who first recommended the practice, need result in the injury of the tree, spiritually or bodily—the one uses a smart blow upon the limbs from the burly fist of his vinedressers, by way of exciting their appetites for breakfast and sup-

per, stimulated as they are by the prospect of "a new hat if they save half a crop;" friend Thomas advised the application of smart blows with a mallet, upon the projecting stump of a side limb cut off for the purpose. See Thomas' American Fruit Culturist, page 318.—Ed.

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DR. WARDER,—

Dear Sir—We have been favored the past summer, as you are aware, with the best crop of peaches that has been realized for many years, and could we but have a moderate crop every season, what gratification it would afford us, in return for the time, trouble and expense that every body, whether a fancy farmer, or one of the old fashioned kind, bestows yearly upon this uncertain fruit, hoping, almost against hope, that the next year will be a favorable season for peaches; but, alas! when every thing appears propitious, the winter having been passed, when the buds have escaped the severity of cold below zero, and have been unharmed by sleet and other accidents, the owner wakes up some morning about the first of May, and finds his orchard blackened by the last night's frost. To find a remedy for this evil, would be a great desideratum; but as we can not control the elements, we must endeavor to meet the exigency in another way. When Mahomet discovered, that, despite all entreaties, the mountain obstinately refused to come to him, he sagely concluded to exercise his own powers of locomotion, and go to it; so let us endeavor to profit by casual observations that we may have made, and apply the principle deduced to our advantage in this case.

Having in my vinery several young peach trees that were severely root pruned last autumn, by digging up the inside grape border to within two feet of the trees, I noticed this spring, that, although under glass, the leaf buds did not burst until a week after those in

the orchards. Whence I infer that a similar operation performed upon the orchard trees would have the effect of retarding their bloom to such a degree that they might escape the influence of a late frost. I propose, therefore, as a remedy for this evil, which we can neither control nor prevent, that we adopt means to avoid a collision with it. If in this month a circular trench be dug, say two spades deep, within four feet of the tree, the ends of the roots thus cut off, will form a callus during the winter, and will be obliged to throw out a new set of fibrous roots in the spring before the buds will expand; I have no doubt this will retard the blossoms at least ten days, without the least injury to the tree, and thus secure a crop of this luscious fruit; always supposing, however, as I have assumed in the premises, that the buds had escaped all previous mischances of the winter.

My object in suggesting this plan now, is that it may be tried, at least to a limited extent, by several of your subscribers in different localities, so that it may be thoroughly tested—and I shall be disappointed if you do not hear of its good effects where applied, should the blossoms happen to be frozen again next April.

Yours,

W. R.

Clifton, October, 1850.

Curculio Again.

I notice in the first number of the Western Horticultural Review, an article by Mr. Buchanan in relation to Curculio, and as his success was so great, I thought I, also, would give my *experience* in the plum business.

My trees were first planted in an orchard, where they failed to retain their fruit—then moved into a poultry yard, and surrounded by hens, chickens, ducks and pigs, for two years, but with never a plum to ripen: next a hen with young chickens were fastened in a coop under each tree, so as to be “convenient

to the bugs”; all this would not do. I then tried fresh manure, as recommended by a writer in the Horticulturist, which excellent paper I faithfully read every month, but I found that the kind of Curculio about my place had no particular *instinct* nor objection to *odors*—so this failed, and for two years no efforts were made, the thing appeared hopeless, and still the same *happy* results were witnessed; but last winter there was so much talk about knockings of all kinds, plum tree knockings included, that I plucked up courage and determined to give it a fair trial, engaged my two little sons’ assistance, watched carefully for the proper time to commence operations, and began on Monday, the 20th of May, when we killed 262, from 20 trees—next day we killed 32—on the 22d, 38—on the 23d, 58—on the 24th, 46—on the 25th, 28—on the 27th, 38—on the 28th, 24—on the 29th, 76—on the 30th, 10—on the 31st, 11—on June 1st, 10—on the 3d, 17—on the 4th, 6—663 in all—enough, one might think, to sting every plum on the place—from this period we tried every few days, without catching any of them; at this time the fruit was nearly full size, and most of the trees so loaded as to require props; and I congratulated myself that there was at length a result worth talking about, and that the *knockings* must be believed in. Full of this conviction, I left home on the 3d of July, and on my return, after an absence of ten days, I found a great deal of the fruit stung—it had commenced ripening, and could not be shaken without injury—so the insect continued its ravages until all the fruit was gone.

Mr. Buchanan’s trees are near his house, and have a foot path among them, which is much used; this, no doubt, contributes to his success. I lost a great many plums by rot, which did not affect his, although there is not much difference in the situation and soil.

Where does the second crop come from?

is a puzzling question. With all their imputed *instinct*, can it be possible that a portion of the larvæ lie deep in the ground during the earlier part of the season on purpose to avoid being killed while the knockings are in progress?

One word more: the shaking or jarring process will not do for large trees, even with gum elastic upon the end of a pounder; I killed one tree, and pounded the bark off of several while engaged in the work, notwithstanding all my care; for the tree is injured by the bruising, even though it be not absolutely barked.

W. R.

MORAL INFLUENCE OF GARDENING.

If there were any doubt as to the influence of gardening on the minds and general habits of the working classes, the simple fact, that the clergy of all denominations are foremost in the ranks of its patrons and promoters, should convince us of its beneficial tendency; but a transitory glance at the inmates of a cottage, where the garden is neatly cultivated, is enough to show that the concomitants of industry—comfort and prudence—reign over the affairs of the place. In a work, which we hardly recollect the subject of, there was almost a sermon comprised in a single sentence. It is strongly impressed on our memory, and is pertinent to the matter here. The author says:—"Gardening is the most rational of all recreations. It teaches forethought, industry, and economy of time. It exerts the mind—invigorates the frame, and constantly reminds us of the great God, whose hand is imprinted on every leaf, and who, in his bountiful goodness, rewards us with the fruits of the earth. To teach the cottager to manage his garden, is to lead him to happiness. To induce the higher classes to love flowers, is to find them innocent gratification, and provide employment for thousands."

There is truth in every word of this. "Gardening is the most rational of all recreations." It is healthful, and every hour expended on it as an occupation, is rewarded by the effect of it on crops. The industry bestowed on a garden is always profitable, and the profit sweetens labor. It is a sorry thing to contemplate the hours that are wasted by the laboring classes in those places where there are no gardens, and it is scarcely to be helped.—What is a man to do when he leaves his work? It is not to be supposed that he can sit down quietly for hours, yet what can he occupy his mind with? He may, while away some of the

time with reading; but reading, notwithstanding cheap literature, is expensive. He seeks in society the amusement which he can not find alone, and society can only be found at the public house; then there is a double evil, because, beside the waste of precious hours, there is a necessary expenditure, or, perhaps, he resorts to the skittle-ground the bagatelle table, or other gambling amusements, in which case the loss to his family is far more serious. Man is a social animal, and unless he has occupation, he gets into mischief. It is almost certain that a man without a garden goes to the public house; and he can not do so without spending money, which would be useful on his childrens' backs, or in the purchase of household comforts. Many an industrious man, unused to tippling, has been totally ruined by his leisure; and it is much to be regretted that there are no means of profitably employing the interval between business and bed-time. If a man has his garden he blends amusement with labor, and profit with both. Gardening teaches forethought, because all the operations are performed with a view to the future. We sow, because we desire to reap. We plan all our affairs with regard to some ulterior, not a present result, and this gives us a habit of thinking and of calculation. A piece of ground is no sooner cleaned of its crops, than we begin to consider what is the best thing to occupy it with, and how soon it will be vacant again. Gardening exalts the mind; of this fact there can be no doubt. Every leaf and flower proclaims the wisdom and goodness of the Almighty. The man who can watch the progress of vegetation, and the effects of the seasons, without being impressed with a proper notion of his Maker's bounty, must be insensible to every thing. Gardening invigorates the frame.

There is hardly an exercise so healthful; the whole body is in motion in the different operations: the digging, hoeing and weeding keep all the muscles in play; and it is admitted by all, that the smell of the newly turned earth is congenial to health; a fact proved, also, by the longevity and healthy lives of the agricultural laborers. The man who loves his garden, wants no other amusement; and instead of wasting his substance in the very natural pursuit of occupation for his mind among companions similarly situated, he finds every shilling in his pocket, and the economy of his household greatly assisted by the crops in his garden; independently of which, there is downright enjoyment, in every sense of the word, from the time the ground is dug to the period of reaping the fruit. The clergy have seen this, and are, therefore, warm patrons of the science.— They have seen, with great satisfaction, that to give a man a garden is to give him profitable occupation for his leisure hours, and keep him out of mischief; and they have always been foremost in the promotion of horticultural societies and allotments of land to the poor. It is gratifying to see the change that has been made in whole towns and villages by the establishment of horticultural societies and the encouragement of cottage gardening. It is also incredible to witness the improvement that a few allotments have made; and it is much to be regretted that there are not means taken to increase the number of gardens, for there are very few things which contribute so much to the changing of idlers and drunkards into useful members of society, as the means they afford of usefully engaging their leisure time.

Omissions in the Horticultural Transactions.

THE preparation of these Reports for the printer having been attended to by different persons, the Editor has found several discrepancies and omissions, which he has endeavored, as far as possible, to correct, and here adds some further items:

RICHARD JENNINGS, Gardener to Platt Evens, exhibited two Bouquets, and cut Dahlias, Egg Plants and Pumpkins.

E. SHREDER,—Potatoes.

FLAMEN BALL,—Quinces, and several varieties of fine Apples.

METEOROLOGICAL TABLE.

CINCINNATI, OCTOBER, 1836.

THERMOM'R.			WEATHER.			RAIN.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.	
1	51	72	clear	cloudy	clear	
2	62	66	do	clear	do	
3	48	67	do	do	do	
4	48	69	fog, clear	do	do	
5	54	57	do do	variable	do	
6	37	63	clear	clear	do	
7	40	59	do	do	do	
8	41	67	fog, clear	do	do	
9	48	71	clear	do	cloudy	
10	60	69	rain	rain	do	.40
11	65	75	cloudy	clear	clear	
12	54	59	do	variable	do	
13	42	62	fog, clear	clear	do	
14	47	64	do do	do	do	
15	46	72	do do	do	do	
16	57	80	do	variable	rain	.20
17	62	67	rain, cl'y	cloudy	var-cl'y	.15
18	52	57	do do	do	clear	.15
19	45	46	clear	do	do	
20	37	74	do	variable	do	
21	38	63	fog, clear	clear	do	
22	48	70	do	do	do	
23	53	62	cloudy	rain	rain	.30
24	43	54	do	cloudy	cloudy	
25	41	49	do	va'le do	do	
26	37	45	variable	variable	variable	
27	36	55	clear	clear	clear	
28	33	60	do	do	do	
29	38	61	fog, do	do	do	
30	37	61	do do	do	do	
31	43	69	do do	do	do	

Rain during the month.....inches 1.20

Clear days in the month.....16

Variable (cloudy at times).....12

Cloudy (sun not visible).....3

Mean tem. of min.....46° 60

Do do do.....62° 76

Mean temperature of the month.....54.65

Do do Oct. 1849.....55.04

Do do do 1848.....56.04

Do do do 1847.....55.33

Do do do 1846.....54.81

Do do do 1845.....56.43

Do do do 1844.....52.86

Do do do 1843.....50.75

Mean of the above eight months.....54.49

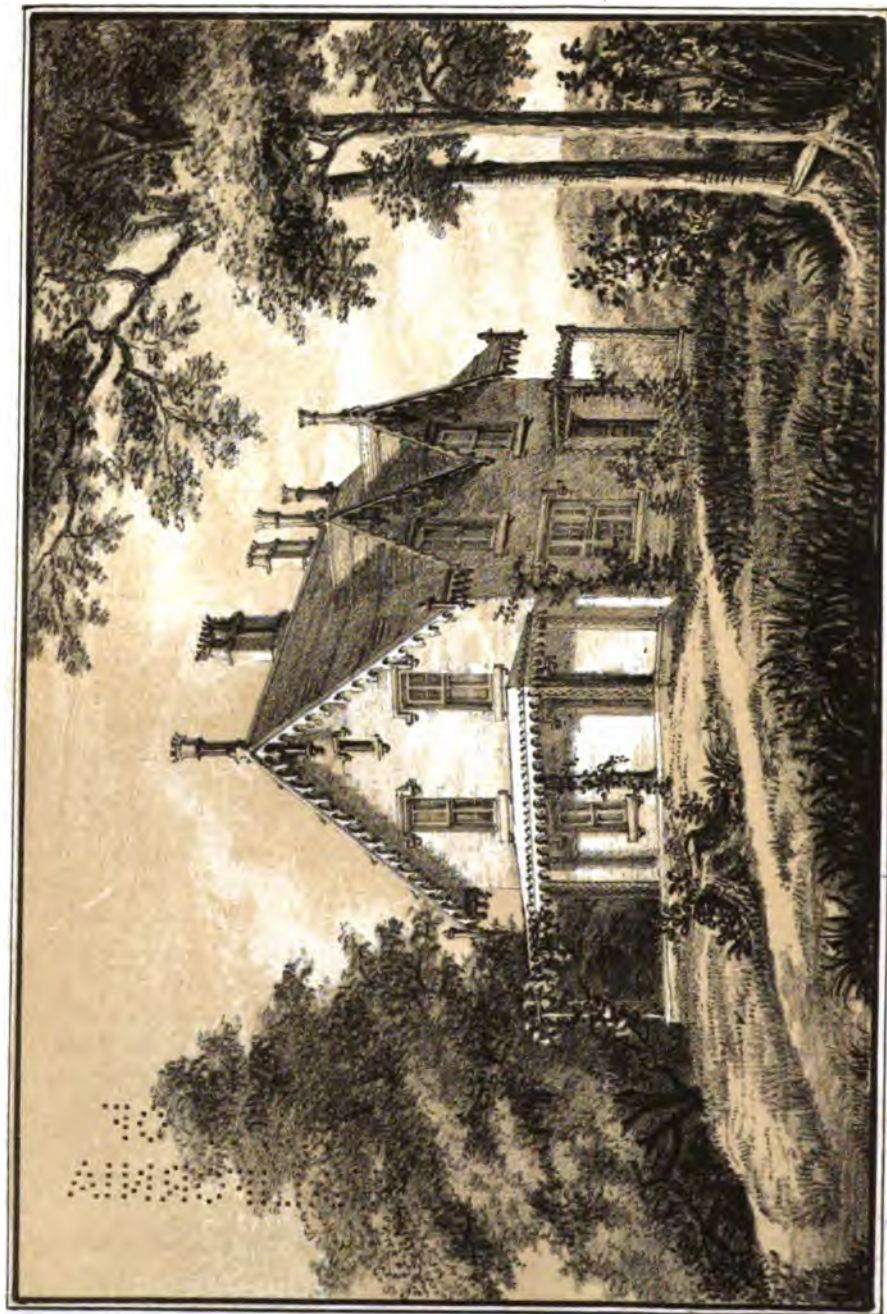
OBSERVATIONS.—A remarkably pleasant month—far less rain than usual—calms on more or less of 26 days; light breezes on more or less of 36, and brisk breezes a portion of 6 days. No high wind.

The max. temp. was at sun rise on the 17th, 18th, 19th and 23d. There was not one day in July in which the sun was not visible; but one in August; not one in September; and three in October,—being four strictly cloudy days in four months.

JOHN LEA.

Morgan & Overend, Printers.

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VOL. I.

DECEMBER, 1850.

No. 3.

HEDGING.

THE subject of Hedging has been so often presented to the reading public, that it would seem to have been worn threadbare long ere this. Why is it, then, that so few hedges are to be found through our country? One of two reasons would appear to be a satisfactory explanation—either, hedges have not answered and will not answer the purposes for which they are designed, or, the instructions which have been given to the public have not been followed, if sufficiently accurate and minute in their details, to enable the beginner to effect the object he has set out to perform.

The former hypothesis I am wholly unprepared to admit; for hedges have been successfully used in other lands, and some persons have succeeded with them in our own country, greatly ornamenting the landscape, with their beautiful lines of green, and making a most effectual barrier or fence of the most durable character, instead of the unsightly zigzag of dead timber piled up as we see it throughout our new settlements, and which are constantly subject to decay; or even the more neat, yet stiff, formal fences of pales and boards, which have the advantage of occupying less ground, but are still subject to decay, and require renewal in a few years.

The latter supposition is forced upon me, by observations made upon so many attempts at Hedging which have resulted in disappointment, every where around us, and which can not fail to bring the practice into disfavor.

It is with no expectation that I am better qualified than those who have written heretofore, to instruct community in the best methods of constructing a live fence, that this essay is attempted; but I fear that the frequent failures in the results of those who have planted, will have the effect of discouraging others from attempting in this way to do their share of the laudable work of beautifying our country. It is desirable that the whole system should be relieved from the odium of failure which threatens to attach to it; if this can be done by pointing out some of the glaring defects of nearly all of the hedges which have fallen under my notice, I shall feel that good service will have been rendered to the cause of Horticulture.

It is useless for me to attempt a description of the beauty of these live green fences, their effect upon the landscape, especially as they are observed on an uneven surface, rising and falling in easy and natural curves—must be seen to be fully appreciated—particularly by

those of us who have grown up on the confines of the wilderness, and who, after a long ride in an unbroken forest, have often been charmed with meeting even a *worm fence* inclosing only a newly planted corn field in a *deadening*; charmed, because it was an evidence of the progress of civilization—but how much more shall we not be charmed, when in the advance of higher culture, we come to see, with the disappearance of the stumps, the advent of these beautiful inclosures of our fields and gardens, *well* grown and well trimmed live fences!

Hedges are applicable to various purposes upon the Farm, the Lawn, and the Garden, and their management and the selection of the different plants, in each case, depends upon the object to be attained, whether it be a fence, a screen, or a shelter, or some combination of any or all of these.

For a *Fence*, the stronger growing hedge plants should be selected, those having thorns or spines, or which, when judiciously trimmed, will furnish short, stout branches, will best effect the desired object. First of these, for this latitude, and further South, is the *Maclura* or *Osage Orange*, called also *Bodark*, (*bois d'arc*), anglicé *bow-wood*, a native of Texas and Arkansas, but admirably adapted to our climate, growing luxuriantly and withstanding the winters very well, except that when young and grown too late in the autumn, they are sometimes frozen back, as is often the case with peaches, plums and cherries, in our nurseries. The *Maclura* claims our attention for this purpose, on account of its beautiful bright green and shining foliage which is retained until late in the autumn, as well as for its vigorous growth, and the admirable manner in which it bears the clippings necessary to make a good hedge. It is decidedly *the* hedge plant.

Thorns of various kinds have been extensively used, and this was very natural, as

they are so universally employed in Great Britain, the land of hedges. The English thorn, was most generally planted, not only because its fitness for this purpose was already established at home, but because it was more readily and cheaply obtained by importation from England than our nursery-men could grow *quicks* of any kind here. It has perhaps contributed much to the disfavor with which hedges are viewed by our countrymen, who have witnessed so many failures in the attempts to make fences with it in the United States. For even when the most fortunate planters have succeeded in constructing a barrier with English Thorns, whether by plashing and trimming, or by trimming alone, they are almost universally disappointed in the result, which is nearly always a naked fence of dead looking brush, destitute of leaves after midsummer, at which time, the native of a cooler and more humid climate, suffers from our fervid sunshine and sheds its verdant clothing.

The same objection applies also to many of our own Thorns—but there may be some among this beautiful family which are not subject to the same defect; one is well known to be free from it—the *Cock-spur*, (*Crataegus crus galli*) used extensively about Wilmington, Del., where are some of the finest and best grown hedges, for farm use, that are to be found on our continent. This plant is a native of our Middle States, and is truly beautiful, with its deep green polished leaves, which are long and entire, with a serrated margin; the thorns are long, slender and tough, but not quite so stiff as those on the *Maclura*.

The native *Crab Apple* is sometimes used, it is easily grown from seed, but is not so vigorous as some other plants; it bears clipping very well, is exquisitely beautiful when clothed with its fragrant blossoms, but loses its leaves at midsummer, like most of the Thorns.

The *Buck Thorn*, *Rhamnus cathartica* has

been used to a considerable extent in the Northern States, to which, for its hardiness it is especially adapted. It retains its small, green leaves till late in the autumn, being now (the middle of November) quite green. A. H. Ernst has a pretty screen of this plant upon the top of his garden wall bordering upon the Harrison turnpike, which is very neatly trimmed and promises to make a good fence.

Many attempts have been made to apply the Honey Locust to this purpose, but, so far as they have come under my notice, all have failed—too often, no doubt, from the same causes which have prevented success in other plantings. It is, perhaps, too vigorous in its growth and will undoubtedly require more vigilance than some of our hedge dressers will consent to bestow upon its treatment. Though in favorable situations, the *Gleditsia* becomes a large tree, every one must have observed the effect of clipping, in the compact and round bunches composed of short branches, making an impenetrable mass where ever one of these plants has grown in an open common or a closely fed pasture, where the cattle have browsed off the tender young shoots as fast as they were produced. This effect has satisfied me that it will become one of the best plants for strong outside fences, and its advantages are chiefly these:—its easy propagation from these, —its strong and rapid growth, its endurance of severe clipping, and finally, its tendency when clipped to produce a multitude of strong short jointed shoots, while the whole plant is covered with terrible thorns that bid defiance to the approach of man or beast. The cause of failure in the hedges which have fallen under my own observation, has been, simply the want of trimming, in consequence of which the bushes became tall trees.

Other plants have been used for this purpose but they need not be mentioned in this place—excepting the Yellow Willows, which may be

well introduced where the ground is too wet for other hedge plants, for if set very closely and properly trimmed they will form an impassable barrier.

Shelter from the cold winds is often an object of great importance to the gardener, and it is an established fact that this may be better obtained from an evergreen hedge, than from a close board fence, and the former is certainly the more sightly object. There is a degree of warmth and a comfortable feeling on the sunny side of a close cedar hedge, even on a cold winter's day, that can scarcely be imagined—but which may be realized by any one who will take the trouble to make the observation, and all who wish to enjoy the comfort of a shelter of this kind will be prompted to surround their gardens with evergreen hedges.

There are several plants that are well adapted to this purpose—but the cheapest, most rapidly produced, and therefore the most desirable and most acceptable to all, is the common red cedar, *Juniperus Virginiana*, which is readily grown from seeds, and will be large enough for planting out in two years, and will furnish quite a shelter at the end of three or four seasons. It also bears clipping remarkably well, though, even if entirely neglected, it will often become so close as to make a compact wall of green from the very ground. Those who do not wish to incur the delay and trouble of raising from seed, may always purchase the red cedar from our nurserymen at a reasonable rate.

The American arbor-vitæ, *Thuja occidentalis*, another native, is one of the very best of the conifers or turpentine bearing trees, for the purposes we have under consideration—it is found in our nurseries of a suitable size for planting, and well furnished with branches to the ground—the best mode of propagating it is by layering the lower branches, which root very freely and may be removed after one

season. This plant is wonderfully improved by clipping, some specimens that were very open and straggling in the spring, have been made quite thick and bushy in one summer by having their limbs judiciously shortened in, and then formed quite ornamental objects.

The Chinese arbor-vitæ, *Thuja orientalis*, is another evergreen of great beauty and admirably adapted for a shelter-hedge, though less fit than either of the two preceding, to make a fence to resist the inroads of marauders of any kind. Other species, are well adapted to the purpose, especially the beautiful Californian *T. imbricata*; though, as yet, too rare to be thus applied.

In the Eastern States where evergreens of every sort are much more cultivated than with us, the Norway spruce, *Abies communis*, has been used for this purpose and found to answer admirably; it naturally grows thick and bushy from the base, and it bears the knife remarkably well—at present prices, the plants would be rather expensive to be thus used, and, except to the most wealthy and to those who have already supplied their lawns with a sufficiency of this kind of evergreen, it would appear almost a sacrilege to use plants which are not merely rare, but highly ornamental and valuable as single trees.

The American, or Red and Black Spruce, *A. rubra* and *nigra*, might answer an equally good purpose but I have never seen them applied to this end.

The Hemlock Spruce, *A. canadensis*, so beautiful in its native haunts, whether as a single pyramid of darkest green or in a group, and which is now beginning to be appreciated by our landscape gardeners, who are so tardily learning to imitate nature by taking their best ideas from herself, is very well suited for a shelter to a garden or lawn, and forms a deep green outline to the landscape.

Many other plants might be mentioned as well adapted to the purposes indicated. Some

of the prettiest must be merely named in this place. The Holly, where it may be obtained, will form a beautiful evergreen hedge, and a pretty good barrier against cattle, of exquisite green, and ornamented in the depths of winter with its scarlet berries, its charms have often claimed the aid of the poets to perpetuate their praises. The Mahonia aquifolia promises to be a better plant for us, being more abundantly cultivated and more readily transplanted; its resemblance to the Holly will render it a good substitute in this region. The Yew, whether English or Irish variety, would answer very admirably for interior sub-divisions of the garden, where a moderate shelter or screen is desired; their deep green foliage, and exceedingly snug habit, will render them peculiarly appropriate for this object. For a low hedge, such as is often desired in a cemetery, where a boundary designation, rather than a selfish high fence is needed, and where duration is an especial recommendation, there is nothing better than the Tree-Box, which may be trimmed to any desired shape.

For those who do not feel able to procure the kinds of hedge plants already mentioned, many of which are expensive, some of the deciduous species will answer a very good purpose, as there are many which retain their foliage through most of the winter. Among these, the commonest and most easily propagated, is the Privet—*Ligustrum vulgare*?—which will grow readily from cuttings, is thickly studded with small, dark green leaves, that remain all winter, affording a nice shelter. The chief objection to this plant is, that it has been found subject to a blight, as little understood, and, therefore, as mysterious as that of the Pear tree; some beautiful screens made of this species were so much disfigured by dead plants and consequent gaps, that the proprietors were obliged to remove them entirely.

The Barberry, or *Berberis vulgaris* when young, or when trimmed so as to be well furnished with young shoots, retains its foliage for a long time, and forms at all seasons a beautiful screen, and bearing its crimson berries, that furnish so grateful an acid jelly, and fever-drink, when properly prepared by the careful house-wife.

The *Pyrus japonica*, holding its leaves until late in the autumn, and putting on its bright scarlet flowers in early spring, is deservedly a favorite with most persons, despite its straggling habit, and forms a pretty screen.

Screen Hedges, are often needed about our country homes—for as we have no private back yards about the kitchen door, as in cities, there must always be a part of the grounds, that even the neatest housekeeper would prefer to conceal from the scrutiny of visitors; then there is the coach-house, or stable, and the wood pile, or some other such object, that the judicious landscape gardener may wish to hide. To effect this desirable object, there are many shrubs which may be advantageously planted.

The Barberry, just named, will quickly make a very pretty screen. The Privet, also, where it does not blight, will admirably answer the same purpose, both for winter and summer. The Crab Apple, on account of its blossoms, is particularly desirable. But one of the quickest and prettiest screens is made with the *Althea*, which strikes readily from cuttings, grows rapidly, and furnishes a constant succession of flowers, of varied hue, during the midsummer, when few plants are in blossom. The only objection to it is, that it is late in putting on its foliage in the spring, being almost as “lazy” as the *Catalpa* and Kentucky coffee tree.

The most rapid growth for a tall screen, will be furnished by the Mock Orange, or *Philadelphus*, which also bears a profusion of showy white flowers. The Lilac is a universal favorite.

Some of the prettiest, snug screens, and subordinate divisions of the garden or lawn, may be constructed of the *Beeches*, *Birches*, and *Hornbeams*, which are all notable for the exceeding beauty and feathery lightness of their foliage, which is also remarkably neat and trim.

These kinds are not so well adapted for a fence as many others, but for a screen they may be often selected as preferable to almost any thing else. The young plants may be set closer, if the intention be to produce a result quickly, and the plashing process may then be applied with advantage;—the stems being interwoven together in two opposite directions, like a lattice, will increase their strength also, as in many places they will become inarched. This is the more desirable where the screen may be wanted to serve as a slight fence also, for a part of the year, as for instance in pasturing the lawn occasionally with sheep—as has been recently recommended by some amateurs, who do not like the labor of the repeated mowings, so necessary to keep the grass in order.

The Beech and Birch will both bear the clipping of the shears remarkably well, but will require as much care as any other hedge to preserve the foliage on the lower parts of the plants, especially on account of the natural upward tendency of their shoots, and the strong propensity of those who may have charge of the trimming, to be led by the natural growth, and give them perpendicular walls instead of slopes, so strongly recommended under the appropriate head; the almost inevitable result of this perpendicularity will be a leaning over, from the natural extension of the upper twigs, and this will soon cause a decay and thinness below.

The plants of the *Fagus Sylvatica* are imported by the Nurserymen, and after being grown a year or two, are in very fine condition for setting out;—nothing can be im-

agined more attractive for this purpose, than the rows of small plants I saw last November, at the Nurseries of Messrs. Hovey & Co., in Cambridge, Mass., and Parsons & Co., Flushing, L. I.; they were even at that time perfectly covered with beautiful green leaves, from the ground to their tops. Why will not our own Beech and Hornbeam answer an equally good purpose? and why can we not have some grown by the Nurserymen in this part of the world?

Any of the strong growing roses will make a good screen in a short time. The common sweet-brier is a great favorite with all to whom its poetical associations, and its fragrance are familiar; many of the Prairie roses would be admirably adapted to this purpose; and, for southern latitudes, the Chickasaw rose would be the favorite, with its pure white flowers, resting upon their appropriate setting of emerald, the brilliant green leaves, which remain during the winter; it is a rapid grower, and is frequently used about Natchez as a cover to the fences, which it very soon conceals—and as they decay it forms quite a formidable barrier, or hedge;—its wild luxuriance does not present the neat and trim aspect we expect in a hedge—and, like all of the rose family, it is subject to a very serious objection for such a purpose—the accumulation of old wood—which is overwhelmed and smothered by the vigorous canes of young shoots that are annually produced, and which, in almost all roses, are the best provided with blossoms the ensuing year.

The Boursalt roses, being free in their growth, and brilliant in their colors and foliage, are well adapted to this object. But one of the most showy plants of this class, is the rose called Glory of Rosamenes, which is a free bloomer until late in the fall, and quite pretty with its crimson flowers crowning the vigorous shoots of deepest green.

In forming a screen of almost any of this

class of climbing roses, it will be necessary to provide a trellis for their support, and having this, we may prefer using some of the vines, whether herbaceous or woody, for the same purpose. Either the Ipomœas, the Basella, Cobea, or Calestegia, make a dense screen during the latter part of Summer, but the more persistent foliage of the Chinese honeysuckle, or others of this genus, would be preferable.

Having determined, according to the object we have in view, what class of plants we should select for a hedge, we should be guided by a few simple principles—founded upon observation and common sense—in the manner of doing the work at different stages, from the planting to the completion of the object.

Preparation of the ground and manuring. Whatever is expected to grow well, and thus repay the outlay of its purchase, is worthy of a superior preparation of the soil intended for its reception, and no niggardly expenditure of labor in this stage of the proceeding can be expected to yield a happy result. In planting any of the roses for a screen, which is intended to last for several years, the ground should be dug deeply and highly enriched with manure—or, if the soil be naturally poor, it should be removed entirely, and its place supplied by good compost. This will not be necessary with common hedges, but in every case a thorough preparation of the ground will be at least a judicious outlay, and may save a year in the completion of the object at which we aim. If the ground be in grass, it may be prepared by the spade or plow, six or eight feet wide, during the winter, so as to be mellowed by the frost—or if notice is given the previous year, a couple of rows of potatoes may be taken off, as an excellent preparation; these should be well manured.

Planting.—The ground having been thoroughly prepared, and level, not ridged, but

rather hollowed, the garden line is to be stretched along the course of the future hedge, and this should never be within five feet of any standing fence, as the shade and interruption of fresh air have a very bad effect upon the growth of the plants, and if too close, will entirely mar the beauty of the hedge. The distance between the plants is another very important matter of consideration—most writers and planters have committed the great error of crowding. The different plants used are so varied in their habit, that no fixed rule can be laid down for all of them, but be sure to avoid setting the plants too closely.

The Honey locust, for instance, which in our forests often attains a diameter of two feet, or the Bodark, which, in a few years grows to the thickness of one foot, need space, or they will inevitably be smothered. To place them in a single row, four, five or six inches apart, or in a double row, alternating plants and spaces, as so often recommended, even at nine inches apart in the rows, would surely result, sooner or later, in the death of most of the plants. For the former, I should prefer two feet intervals in a single row, for the latter eighteen or twenty inches, and this conclusion is the result of experience, and not mere theoretical speculation.

For the smaller growing shrubs, a less space should be allowed, but no hedge plant, unless intended for a mere screen, and to produce a very hasty effect, should ever be planted closer than nine inches. The roses would all do better at three feet, or more,—the same distance, or greater would answer for the evergreens,—even the Swedish Juniper, so remarkably upright in its habit, would soon fill up the space of three feet from stem to stem. Altheas, Barberries, Privet, Beech, Thorns, Buckthorn—indeed, almost any hedge plant, unless it be of a very delicate growth, will thrive better and make a much handsomer, and more durable fence

or screen, if planted at two or three feet, than if less than one,—and even if it be objected that a year more is required to complete the work, what is that, in the case of a fence, which is to last for fifty years or more, in comparison with the prospect of frequent gaps occasioned by starvation and suffocation of the plants?

The next consideration should be the *cultivation* to be applied. The first year after planting, a row of potatoes may be grown on each side of the hedge; this has the double advantage of yielding some profit, and leaving the ground in a good condition, beside the inducement thus held out to secure the clean culture of the plants,—and this is an essential element of the future success of the enterprise;—not a blade of grass should ever be allowed to spear in among the new comers—and for the sake of its eradication the cultivation of a crop of potatoes the year before setting the hedge, was especially recommended. The ground must be well dug or plowed at least once this season, and constantly hoed and cultivated.

The second, and all succeeding years, the most perfect cultivation must be maintained, until the hedge is able to take care of itself—which will be when it is four years old—if it has been properly trimmed, if otherwise, never. During all this time no weed nor grass should be allowed to remain within the strip of land ten feet wide appropriated to the hedge. Think not that you are dealing with a dead wooden fence, which needs nothing for its support but the mere ground upon which it stands; on the contrary, you are attempting to grow a crop of great importance, which, with proper care, will produce for your fields a crown of laurel, that is, of *Maclura*; or, with the too common neglect, a wild thicket of weeds, utterly failing in its object, and bringing disgrace upon both the planter and the planted.

Trimming the hedge is a matter of the utmost importance, and more failures have resulted from ignorance and neglect in this, than in any or all other parts of the business. The establishment of certain principles of action, and their faithful execution, are necessary to success. It is a fact which all must have observed, that so soon as a shrub or tree begins to spread out its upper branches, the lower limbs cease to grow,—this is owing to the combined influence of the tendency of the sap to flow most freely to the highest buds, at the expense of the lower, and the shade and want of air, produced by the expansion of the upper branches. This is all right and proper in the production of trees, but a hedge is very different from a forest, or a row of nursery trees, which are grown for their stems and for sale—while the hedge is cultivated for its impenetrable branches, and to keep for one's self, even though it be the envy of the whole country. An entirely different system of tactics must be adopted to produce this effect, for its neglect gives us a row of trees, closely furnished with branches at the top, but naked at the bottom—where we wish to oppose a resisting medium to the long nose of our neighbor's grunter; in fact, this is a hedge up side down; a section of it, instead of giving us a triangle with a broad base upon the ground, equaling or exceeding its height, will represent a tall, narrow triangle resting upon its apex or point. This is almost inevitably the result with all the plans for plashing and wattling that have ever been invented, and will probably ever remain so, while vegetable physiology continues to be based upon the same laws which now appear to guide the currents of sap, and consequent growth of branches.

To descend to more practical minutiae, let us suppose that we are planting *Maclura*, of one year's growth in the seed bed, they are not well matured, and are best cut off at

the ground. If we give them a summer of good cultivation in a rich soil, at twenty inches apart, in a single row,—at the end of the first season, the second of their lives, they will have made strong shoots—one, two, or more, from each plant, varying in height from two to four feet, or more. These are all to be cut off at the ground, or within two inches of it, late in the winter, after the leaves have fallen, or early in the spring;—this is to be done with a sharp knife, or even with a strong, but sharp brush scythe, and the labor of the first season is completed, so far as the hedger is concerned,—not so with the hedge itself, every plant of which will be industriously occupying each respite from severe frost, in multiplying its rootlets, and preparing a whole company of buds, from which to send up a larger and more numerous growth of canes the next year. By the middle of June, or later, these will have attained a height of two or three feet or more, and the woody fiber will have been pretty freely deposited at their lower portions. The strong shears should now be brought into play, sweeping off every shoot at four inches above the surface of the ground. The rubbish is to be removed, and a thorough cultivation of the soil effected, which will enable the plants to make a very pretty and vastly thickened growth before the frosts of autumn check the second year's progress.

The hedge is now beginning to be quite a respectable thicket—all of which, however, is to be removed as nearly back to the summer pruning as possible, in the middle line of the plants, and inclining toward the ground on either side, so as to commence the angular shape of the hedge—which is to be henceforth persisted in, and which will constitute its great beauty and the secret of its usefulness, since such a form will allow the greatest possible amount of air, and rain, and sunshine to fall upon the whole surface of the

plants. The highest stumps will now be about eight inches from the ground—or, if you be very tender hearted, and still attempt to carry out this decapitating process, perhaps they will be ten inches, or a foot high. This close cutting back, though essential to the future success of the hedge, is most difficult to have executed;—you must nerve yourself with all your cruelty and bravery, if you intend personally to engage in the undertaking, and must stand guard obdurately over any persons employed in your service, while they are engaged in this repeated amputation.

The third year the June trimming is to be repeated, earlier or later, according to the season and the growth of your plants, but so soon as the shoots begin to grow woody so as to secure the development of a new crop of young buds, and also to avoid the impending hazard of breaking out the shoots at their junction with last year's wood. The hedge is now four inches higher, and as the lateral branches are increasing in number and importance, they may have their ends gently nipped off with the shears so as to give the sides a snug appearance, and to encourage them to ramify as much as possible. In August of this year the hedge will bear another clipping, but as the number of shoots has greatly increased, their length and thickness will have proportionately diminished, and the labor will be much lighter; still, you must not relax your severity,—four inches gain in height is as much as should be allowed at each cutting, and the top of your hedge should not be more than sixteen or eighteen inches above the ground. A third crop of tender green will now be thrown out in a few days or weeks, according to the season, and your three year old hedge will astonish even yourself, by its perfect fullness and closeness,—so that you may feel disposed, if near a State Fair, to enter it for competition against all the hedges

of the country; and should you be so fortunate as to have a Committee appointed to investigate its merits, they may come, and they will admire, and applaud—possibly they may even wonder,—but they will never believe that the even and compact wall of living green, three feet wide at the bottom, and eighteen inches high, has resulted from a single row of plants set twenty inches distant from each other, *three* years before.

The Hedge is a favorite topic, and perhaps some readers will think that the effusions of the pen should have received some of the severe prunings so urgently recommended for the *Maclura*; however, it is to be hoped that the readers of the *Review* will not consider this article too long and tediously prolix. The subject is one that could not be introduced even in this cursory manner, without occupying several pages. The leading principles only have been suggested for your consideration, with some simple directions for their application, and a few indications as to the selection of plants;—a proper management of this subject would require a book for the elimination of the physiological principles involved, and their application to the construction of Live Fences;—that book is yet to be written for the American public, if indeed, the frequent failures in the attempts to construct hedges, have not already discouraged many farmers from undertaking another experiment. Whenever they are prepared to appreciate the information necessary to enable them to make perfect hedges, there is no doubt some well qualified person may be found to supply their wants. In the meantime, they are recommended to gather these crumbs, in the absence of more substantial aliment. Pardon the egotism necessarily evolved in this discussion; some one has said that a Hobby-horse is occasionally as hard to hold, as an Arab steed of the highest mettle—it may be that my pony has run away with his rider.

For the Western Horticultural Review.

PEACHES—BUDDED AND NATURAL FRUIT.

MR. EDITOR:—It is with great pleasure that I have perused the first number of your journal, it being a work that is much needed as a medium for Western Horticulturists to communicate with one another, and also as an organ for your now flourishing society, which has shown very plainly in the last autumnal exhibition, the interest taken in this branch of industry in the West, and more especially in the neighborhood of your city.

We are all a selfish set of mortals, and I for one would like to have my curiosity satisfied through your paper, upon a subject left unsettled at the convention of fruit growers held at Columbus in December last; I refer to the question, then discussed, respecting the relative hardness of budded and seedling peaches. At that time the majority seemed disposed to contend that there was something in budding which made the trees more tender, and consequently, that there were most failures in the crop on worked trees. Without taking either side, I propose here to give my own experience, hoping that it will elicit something from larger cultivators, who have had an opportunity of making more extended observations. I have nearly eighty trees in bearing, about half of which are budded. The Gest's seedling, originated in Cincinnati, Heath free, Early red Rare-ripe and Blood cling, commenced bearing while quite small, and have produced as well, if not better than any of my natural trees, while five other varieties, for which I waited so long for them to prove themselves, that I lost the names, have borne a few very fine large fruit, but not enough to pay for the trouble and expense of cultivation. Now for the query. Are all *budded* trees more tender, or are some tender varieties propagated by budding, merely

for their size or flavor, without regard to their bearing properties? I hope some of your readers will take up this subject, and let us have their views upon it. In the article of your first number, upon peaches reproducing themselves, the writer seems disposed to think it an easy matter to have an orchard of fine fruit, by a selection of the seed, but my experience has been exactly the reverse of his; I considered myself well repaid by having one out of about fifty trees, which produced fruit that could be considered first rate, though the seeds were selected only from the best peaches, and great care was also taken to keep them moist, as suggested by the writer. Of all these, only two trees bore fruit, which possessed the character of the originals.

The opening of your market to this part of the State by the railroad, has awakened our people to the importance of cultivating good fruit, especially peaches, which have of late produced crops on alternate years with those in the neighborhood of Cincinnati, so that we are enabled to exchange favors.—Last year you had a severe frost while your trees were in full bloom, ours were just opening at the time and escaped—this year ours were all destroyed, and yours escaped to furnish an abundant yield.

Respectfully,
Clark County, Ohio.

T.

REMARKS.—Many thanks to our modest correspondent for suggesting the observation and record of the facts upon this subject, which was left in a very unsatisfactory state by the Fruit Convention at Columbus last year. Without wishing to decide the question in advance, and with very limited data, I suspect that he has suggested the true

source of the difficulty, to wit:—Many of the fine peaches which are propagated by budding, are those that have fine flavor and appearance, and which may yield abundant crops under favorable circumstances, but, from some cause, they are often very uncertain bearers; they may expand their blossoms a week earlier, and thus suffer from a late frost, while their more tardy neighbors escape.

No evidence has been adduced which has satisfactorily proved, that the mere process of budding has any effect in making the trees thus propagated more tender than others similarly situated, nor does there appear to be any good reason why they should not be equally productive. It has happened, however, that some of our own seedlings have borne with more regularity, than some of the budded varieties beside them, which have been introduced from Southern Europe, and from our southern States. This may have been accidental; if it prove to be generally the case, it will be an inducement to continue growing new varieties from seed, from which to propagate for our orchards. But the uncertainty is too great to think of planting whole fields of unproved seedlings, the large majority of which will, in all probability, be utterly worthless. One very prolific source of fallacy, in the discussions of the Fruit Convention, when this topic was before it, was that many of the speakers had made their observations in a region of country where, in most orchards, nothing but wildings could be found, and they of an inferior character. Beside, with all due respect to their *taste*, it cannot be doubted, that the judgment of those who have never enjoyed the opportunity of testing really fine fruit, would not furnish so good testimony as to the merits of any specimens, as if they had been intimate with the best varieties; and some of our members at that meeting, were, perhaps, to be classed in the former category.

Our correspondent's experience with regard to seedling peaches, is about the same as that of most who have preceded him, though there are some varieties which reproduce fruit exceedingly like the parent, stock and many large orchards along the Ohio river have been produced in this way, with remarkable similarity in the peaches, still most of the seedlings are very indifferent. The Heath Cling, the Yellow Free-stone with white pit, and some other varieties are most likely to yield fruits similar to their progenitors. Six or eight seedlings were presented to the Fruit Committee of the Cincinnati Horticultural Society during the past season, which were decided to be better than many which are named and extensively cultivated, but they were not considered to have such extraordinary merit, as to entitle them to names or premiums. These were selected, too, from among hundreds of other seedlings which were worthless.

One word in reference to climate. We are constantly told that the early peach orchards were more thrifty than they are at present, and moreover, that they bore regularly every year, whereas, we now think ourselves fortunate to have a general crop every fifth year. Though not one of those who annually aver, as each season is passing, that "*this* is the most remarkable season," the hottest, or the coldest, the driest, or the wettest, as the case may be, it must be admitted as a fact, that the meteorological character of the country is changed: this might have been prognosticated by any one who had reflected upon the effects which must be produced upon the climate of a country by changing its surface from dark forests to smiling open fields; the extremes of heat and cold, and especially of moisture and drought, will continue to depart further from the *mean* temperature, though that may not vary materially in a long series of years in any given locality.

For the Western Horticultural Review.

FOREIGN GRAPES.

Their Propagation from Single Eyes, Management, and Culture.

It is generally admitted that the native varieties of grape, how desirable soever they may be for the purpose of wine making, are inferior as dessert fruits, both in beauty, size, flavor and delicacy of texture, to those cultivated for this purpose in Europe, and especially to those famous varieties grown in the vineries of England, the Black Hamburgh, Muscat of Alexandria, Royal Muscadine and others; it is not generally known, however, that these varieties may be produced here without any fire-heat, in as high a degree of perfection as they have ever attained in the most celebrated forcing houses of Europe, and at an expenditure very little above that which is required for the production of a good crop from the common Catawba grape. In support of this assertion, it is only necessary to refer to the grapes from the vinery of Wm. Resor, exhibited at the autumnal exhibition of the Cincinnati Horticultural Society. They were produced without fire-heat. No more outlay is necessary than the cost of erecting a vinery, with its prepared soil, and the needful attention to pruning, training, ventilating and watering, all of which labor will be very little additional expense to any one who already has a gardener in his employ.

In the course of this paper I shall endeavor to give some simple instructions and suggestions to those who may not be practically acquainted with the management of vineries; this will be attempted even at the risk of repeating much that has been already written on the subject, as I believe its importance will justify that repetition, as well as excuse my presumption in writing upon a topic which has already occupied the pens of some of the ablest horticulturists of the age. A vinery

may be built with stone foundations, brick walls, upright sash in front, sash roof, doors, and everything complete, and the border made, at an expense varying from seven dollars and a half to ten dollars per front foot. If the walls be made of wood, the cost would be rather less, but the vinery will not be so durable, nor so easily managed.

Propagation of the Vines.—The cuttings are to be taken from the old plants in the autumn, selecting only the wood that has been well ripened. They may then be tied up in bundles and stowed away until wanted, in a cellar or other place, where they will neither freeze much, nor become too dry, nor yet moldy; if convenient, they may be left on the old vines until wanted for cutting and planting, which work may be done at any time during the winter, as the eyes will keep in a dormant state as well in the pots as in the loose cuttings stowed in the cellar, and beside, the cut ends will be forming their callus preparatory to rooting. The only objection to this earlier potting will be that they may be in the way during the winter. To this we reply, that the slightest shelter will suffice for their protection, a mere cold frame will answer admirably. The eyes are to be selected from the soundest wood, and cut with a sharp knife one inch above, and as much below, each good bud. If the cuttings have been kept in too dry a place during the winter, the eyes should be steeped in water twelve hours before planting, as this will help their vegetation. About the first or second week in March, if it have not been done before, plant single eyes in thumb-pots, placing them half an inch beneath the surface of the soil, which should be a compost of one half

light, turfy loam, and one half leaf-mold ; a richer soil may be used in repotting after they have struck root. When planted, give the pots a good watering, and plunge them into a brisk bottom-heat. It may appear useless to say any thing about the hot bed, to produce this heat, but so much depends upon its being well made, and I have seen so many failures resulting from want of proper attention to this matter, that I shall venture to give a few brief directions respecting it. Horse manure, which has passed its most violent ammoniacal heat, should be used, with an equal amount of forest leaves. The manure should have been well forked over, and turned repeatedly, so as to have it all in about the same condition as to its fermentation, it should then be well mixed with the leaves, and built up in a square pile a foot larger each way than the frame, and four feet high, and when at a brisk heat, is fit for use, but the first violent fermentation is too ammoniacal for our purpose, and should have passed, before the bed is used. By a brisk bottom-heat, I mean a temperature of 85° to 90° of Fahrenheit, and this must be maintained by fresh "linings," if necessary, that is, by piling up fresh, hot dung all around the frame and hot bed, say two feet wide, and this may be done, one side at a time, with the best effect. It is essentially important to maintain the temperature faithfully at the period of the first growth of the young shoots, so that the eyes may produce roots as well as leaves. On this account the water used should always be milk-warm, or at 70°, otherwise the roots may be chilled, and the plants be thus so stunted and checked as never to recover. When the eyes have both started and rooted, they may be shifted into four inch pots, and then, warmed manure-water is to be applied. The heat is now to be renewed by fresh manure, or linings, if it should have declined below the standard. Give the plants air up-

on all suitable opportunities, and keep the surface of the soil in the pots frequently stirred. Whenever these pots are filled with roots, the plants will need another shift, stronger manure-water is to be used, and the vines are to be tied up to sticks to keep them off the ground, retaining only one shoot. The height of the frame may be increased by adding a strip or board all round under the sash, so as to give the plants more room, for the great art is to keep them always as near the glass as possible, without being allowed to touch it. By the middle of June these vines will be fit to plant out, being from three to five feet high. If they be not set out, they will require shifting into larger pots, and need to be liberally fed with manure-water, still they will not make one-fourth as much growth as if planted in the border ; respecting which, with the house, something should now be said.

The House or Vinery should be at least fifteen feet wide, with a full southern exposure, and of any length desired. The front wall should rest upon a stone foundation made of arches, to allow the roots free egress to the outside border, for though they think nothing of going through a soft brick in search of their desired food, it is better to give them an easier outlet. This wall should extend five or six feet above the surface of the ground, and at least three feet of its height should be occupied by the upright sash, light being very essential, beneath as well as above the foliage. The roof should be of such a slope as to receive the most direct influence of the sun, during September and October, when it is needed to ripen the fruit and wood.

The Border should be thoroughly drained by digging it out at least three feet deep, to be lower at one end, away from the house, and communicating with a sunken drain to insure the removal of excessive moisture, for standing water is very injurious. The bot-

tom is to be covered six inches deep, with brick rubbish, stones, and skull bones, when accessible,—or, in the absence of more suitable materials, with branches of trees. The compost is then to be thrown in lightly, and filled up to the sill, if the house be wooden, or three inches above the arches, if of brick or stone. The best compost is to be made chiefly of rotten sods, or turf from a light loamy pasture or meadow, mixed with one third of partly decomposed stable manure—or perhaps better, of cow manure,—and with as large a quantity as possible, of bones, oyster shells, and other such matters, in order to make the soil porous.

Planting should be done in June, or so soon as the young vines have acquired sufficient strength and hardiness; when they should be turned out of the pots with the ball of earth entire, and placed at least one foot from the front wall—train them up the rafter, give the plants a few good doses of manure-water, and they will grow from twenty to thirty feet the first year.

Trimming and Treatment. I never stop the vines the first season, but let them have their natural growth until the middle of October, when they are cut back about half way. In the latter part of November, they should be cut back to three or four eyes, when they need protection for the winter by having some straw tied around them, and the border may also be covered with leaves.

Second year—in the Vinery. About the middle of March, strip the straw off the vines, and give the border a good watering; let the vines start naturally, and when the shoots have grown from eight to twelve inches, select two of the strongest, train them up the rafter, and rub out all others. When the weaker of these shoots has grown three or four feet, stop it by pinching off the end, and allow the other shoot to grow for a leading cane, which, in its turn, is to be stopped when

a little beyond the middle of the house, and train one of the *laterals* in its place;—this stopping helps to strengthen the lower eyes for fruiting the next year.

Keep up a free circulation of air throughout the house, and water when requisite. If the mildew should make its appearance on the vines, endeavor to dispel it as quickly as possible, for it will check their growth for the season; this is best done by scattering sulphur over the foliage, and on the floor of the vinery, and by syringing with sulphur-water. In the latter part of the season keep the house open night and day, if the weather be dry, so as to aid in ripening the wood. About the middle of October, cut the vines back to where they were stopped, and remove all the laterals; cut the shorter cane to one eye. In the latter part of November, cut the leading canes back as far as they appear to need it, judging from the strength of the vine—say to six or nine feet—wrap them with straw, apply the leaves to the border, and keep the house well aired during the winter.

Third Year. About the first or second week in March, remove the straw, and paint the vines all over with a mixture of sulphur and soft soap dissolved in water, for the purpose of destroying the insects or eggs that may be concealed in the bark. A cold house may be started about the beginning of April. Give the border a thorough watering, bend the vines down along the front part of the house, in order to induce all the buds to start regularly, syringe them morning and evening with soft water, and keep a moist atmosphere in the house during the day. When the eyes have started, tie the vines carefully to the rafter and syringe gently every morning, and keep up a free circulation of air throughout the house upon all suitable occasions. When the vines commence blooming, suspend the syringing, and keep the house dry until the fruit has set. Train the upper shoot to the

rafter, stop all the rest two joints above the bunches, and tie them carefully to the trellis. So soon as the berries are as large as small peas, thin them freely by removing the smaller grapes with sharp pointed scissors, and cut off the extra bunches, leaving only one to each shoot. The number of shoots or "spurs" must be decided by the judgment of the vine dresser—always avoid over-bearing; immediately after thinning, give the vines a good syringing in the afternoon, and shut up the house while the sun is tolerably hot, so as to give a steam—and repeat this twice a week during the first swelling of the grapes, shutting up the house every evening before the sun has left it. Water the border, if required, and keep the inside of the house sprinkled during the day, this treatment keeps the vines in a vigorous state and aids in the swelling process admirably. In airing the vinery, I have always preferred lowering some of the sashes early in the morning to allow the foul air to escape, which has accumulated during the night—more sashes are opened afterward, so as to admit the air more freely as the sun comes on the house—the sashes are also closed by degrees in the afternoon as the sun is passing off; by this means I endeavor to maintain as equable a temperature as possible, and avoid the extremes of heat and cold which are so liable to produce disease.

In pruning the laterals during the summer, I go over them once a fortnight, and cut them in, to one eye,—but in the latter part of the season I think it advisable to leave one lateral growing on every shoot, to draw the sap up to the bunch of grapes. While the berries are *stoning* give more air than usual, and when they commence their second swelling, the inside border will need watering. The surface should be well loosened with a fork, covered with four or five inches of good rotten manure, boards laid down to walk on and then watered thoroughly; this nourishes the roots of

the vines and helps to swell the berries; if the weather be dry, sprinkle the inside border frequently during the day; when the grapes begin to ripen, keep the inside of the house dry and give plenty of air to produce a good color and flavor to the fruit. When the crop is ripe, leave the house open day and night, in order to ripen the wood.

About the middle of October, give the vines a rough pruning, by cutting out all the laterals and shortening in the leading cane a few feet. In the latter part of November, give them their regular pruning. The short spurring system is that I generally practice, by cutting in the side shoots to one eye, and cutting back the leading cane, more or less, according to its strength; some of the vines may be strong enough to bear near the top of the house next season. The winter treatment is to be the same as last year.

Fourth season. The vines should now be able to bear a very good crop of grapes, though it is bad to be too covetous, and injury may be done by leaving too many bunches, for nothing is more hurtful to the vine than overbearing, and the berries do not come to perfection. Never allow more than one shoot to come from a spur, rub others out as they appear; the spur shoots should generally be at least twelve inches apart. The treatment this year should be about the same as that pursued last season.

Fifth and succeeding years. The vines may now be considered to have attained their full bearing state, though with proper care they may continue to increase in their productiveness; this, however, requires the exercise of great judgment, for the reasons already pointed out, the danger of ruining the vines by over-bearing. Should the vines be enfeebled from any cause, they must be entirely renewed by cutting back and starting afresh

MICHAEL RICE.

Walnut Hills, November 15, 1850.

For the Western Horticultural Review.

FERMENTATION AND TREATMENT OF WINE.

BY JULIUS BRACE, CINCINNATI.

THE growing importance of the manufacture of wine from our already numerous vineyards in this immediate vicinity, calls for the attention of those engaged in that particular branch of industry. The great deficiency of knowledge of the principles which govern the fermentation and changes of the *must* or juice of the grape is sufficiently attested by the numerous poor specimens of wine offered in our market, showing conclusively a want of skill, as well as proper attention to the management of the different changes it undergoes while in its transition from the crude juice of the grape to good marketable wine. There is undoubtedly too much importance attached to *locality and soil*, and too little to care and attention during fermentation. If all could extract the juice from their grapes in precisely the same manner, then the same treatment (other circumstances being similar) would undoubtedly produce nearly the same results; but, with our numerous small beginnings and variety of appliances used in gathering and pressing the grapes, we can look for little uniformity in the quality of the raw juice, hence it becomes absolutely necessary for each one to understand the principles that govern the fermenting process, in order to meet the variety of circumstances that will necessarily follow. Some rack or draw off their wine too much, some not enough; in the course of my remarks I shall attempt to point out the reason why wine may be injured by too much, as well as by too little separation from the lees during its progressive stages of fermentation. In the first place, it will be important to ascertain the character of the agent that produces fermentation, how long that agent should be suffered to operate, and when it is proper to dispense with its influence.

The fermenting or yeast principle is produced during vinous or first fermentation, from a vegetable gluten or gum which exists in the juices of all fruits—this yeast or ferment is formed in greater or less quantities as this gluten or gum pervades more or less, the fermenting mass; hence that having a large quantity of gluten will produce an abundance of the stimulating or fermenting principle, and, in many cases, to the injury of the wine. In drawing the must from the grapes by pressing, some part will be more charged with this gum than others unless the whole amount pressed at once is run into a single receiver, in which case there will be more uniformity in the process of fermentation, than if it is put into a number of casks during the time it is running from the press. This gum or mucilage is held in solution in the juice, and is invisible *before* the fermentation commences, but, so soon as that process begins, the clear liquor becomes turbid, and a separation takes place, some subsides and settles to the bottom, some becomes charged with carbonic acid gas and floats on the top until the gas escapes, when it sinks to the bottom. This is the time to separate the wine from the superabundant yeast, as there will still be enough left to carry forward the fermentation with sufficient rapidity to insure a sound, good wine. The wine, then, will not, in all cases, be clear, but if it is a little turbid, it should be racked off, and the casks well washed out with cold water, and the wine returned into them to complete its fermentation. Some wines will not require a second racking off, as the separation from the ferment or lees will have been sufficiently effected, and the fermentation during its future progress will be moderate enough to fine itself bright

and clear; but if that should not be the case and it still continues turbid or riley, a small quantity of isinglass or fish glue should be dissolved in strong spirits and added, (about one ounce of the glue to one pint of spirit, for a barrel of forty gallons is sufficient,) it should be dissolved warm and put into the bung hole, and then slightly stirred over the top; it is gelatinous and in subsiding, carries down the superabundant particles of ferment that heretofore kept up the action, causing the muddiness of the wine. Whenever the wine appears clear it should be racked off, and, in most cases, it will not need any further assistance, but becomes bright and clear. The process of fermentation does not stop here, however, as it is constantly progressing in the form of an *insensible fermentation*, elaborating and combining the elements of the new and acrid, and producing a mellowness of the wine that is only acquired by age. If the wine has been fined or separated too much from the lees during the first racking off, it will be thin and wanting in "body" and deficient in aroma; this can only be remedied by adding substances to it that will strengthen it, whether sugar or spirit, but either will injure the quality, and the produce will not be of fine flavor or possess the mellowness that is indispensable to good wine; in fact the '*manufacturing*' should be as much avoided as possible. The strength of wine depends upon the amount of sugar contained in the juice of the grape, a portion of this sugar is decomposed and its alcohol combined with another portion of the sugar during the fermenting process; now if the fermentation is hurried too rapidly and is not suspended at the proper time the spirit will, by another fermentation, the aceticus, be converted into vinegar, and the whole irrecoverably lost, as no '*manufacturing* or doctoring' will ever correct a cask of wine after that change has occurred. The acetic acid may be neutralized,

but it will never be sound, good wine; for this reason—a too rapid fermentation should be guarded against. Very weak wines are more liable to become acid than strong ones, for the amount of alcohol elaborated when there is an abundance of sugar, serves to check the rapid vinous fermentation, and prevents its running into the acetic change. Some have tried adding sugar to the juice, but the difference between cane and grape sugar is such that the product has not been satisfactory. I think the juice of well matured Catawba or Cape grapes that are produced in this vicinity, is strong enough to insure good wine without any addition either of spirit or sugar. I have no means of stating positively the strength of our wines compared with those of Europe, but recollect distilling 18 casks for N. Longworth, Esq., in 1842, which yielded 20 per cent. of proof spirit. It was some of the first wine made in this neighborhood, and I do not know whether it was the "*pan juice*." It made a very superior article of brandy, of a flavor unequalled by any imported, and if he has preserved any specimens until now, it is undoubtedly a fine article. I would here remark in connection with wine making that much may be saved by distilling the spirit from the lees and from wines that may unfortunately have turned sour, but distillation should be deferred until the odor of acetic acid is perceptible, as its combination with the alcohol in the process of distillation is indispensable to the fine flavor of good brandy.

SULPHATE OF AMMONIA.—Half an ounce of this salt to each gallon of water is recommended, after numerous trials, as an application to Geraniums, Fuchsias, Peas, Dahlias, and newly potted green house cuttings. It greatly promotes their vigor, but must not be applied oftener than once in ten days.—*Gardeners' Almanac*.

REVIEW OF HORTICULTURIST FOR NOVEMBER 3.

To the Editor of the Western Horticultural Review—

I HAVE been reading the last number of Mr. Downing's Horticulturist, which valuable journal comes to us, as it always does, filled with interesting and useful information upon our favorite topics. This number, however, contains some articles which have so pleased me that I feel constrained to jot down a few of the points of coincidence with my own views, and trust that your readers will allow me to occupy a corner of your Review with my notices of them. By way of apology, allow me to refer to the fable of the shield, gold to one, and silver to the other, according to the side inspected: may it not be so with our reading—some may perceive only dross, where the sparkling grains of rich gold attract another's eyes.

The article on The Best Ornamental Trees would please your friend Sylvanus and every other devoted lover of the dear woods. With the writer, I, too, think the Over-cup oak, or, as it is more commonly called in this country, the Mossy-cup, or the Burr-oak, has been unjustly neglected. It is certainly a most magnificent tree when fully developed; it is sturdy, strong, and stout of heart—every contorted twist of its huge limbs might form a subject for a picture; wild as the writhings of a giant in despair, are those gnarled and twisted branches, as they fling themselves out from the main trunk, and defy the howling blasts of the North charged with frigid snow and sleet. Then, too, the Burr-oak is quite a National tree in some parts of our dear West, though almost unknown in the East. I love the Oaks—they are a most highly respectable family, and claim great antiquity for some of their branches, though we are not informed that they grew in the Garden of Eden.

Among his notices of many beautiful trees,

I was much surprised to find no allusion to the Wild Cherry, which is one of my greatest favorites, with its gracefully curving stem and feathery branches, and delicate foliage, casting a checkered shade. My wild fancy, in personifying the various forest trees, has made the Wild Cherry the Sylph among them.

How melancholy a reflection it is, that the busy ax of the pioneer will continue to destroy such numbers of these denizens of the wilds, that in many places none but the deformed are left behind! Is it not time that a better influence should be brought to bear upon this subject through you, Mr. Editor, in order to cultivate a taste for these things? We should all of us plant trees, forest trees of all kinds. We may not live long to enjoy them, but others will follow after us when we are gone, and to them we owe this little tribute, since we have lived in the *destructive* age of the country, and have at least silently acquiesced in the removal of the old "turkey-roosts" and other time honored trysting places among the trees—trees, which, could they tell a tale, would no doubt recount many happy scenes, as well as warlike strifes, which have transpired beneath their wide spread branches. There is a beautiful custom which obtains in the Canton Basle, Switzerland, that of planting a tree upon every anniversary of the weddings and births in each family. What a love for forest trees would be implanted in the breasts of our children, if each had his own *birth-tree* to remind him of the anniversary of that bright morning when first his eyes were opened upon the glorious beauties of this earth, a memento, too, which, appositely for him, spurns the earth that supports it so bounteously now, but from which it aspires toward the skies, beautifully reminding him that all here is dross, and that he too must anticipate a more

ethereal state of existence, in a higher condition of mental and spiritual development.

Mr. Downing's "Letter from England" contains a graphic description of Chatsworth. It is, indeed, one of the most pleasing accounts we have ever read of that famous place, because it is written by a man whose taste for landscape gardening has been so long and so highly cultivated, that he can fully appreciate the many beauties there developed, and which are, no doubt, in such admirably fine keeping, that their individuality is in a great degree lost to most observers, who can only admire the grand effect of the *tout ensemble*.

The Fountains must be very fine in their effect upon that lovely landscape of "Chatsworth Valley"—and such fountains as he describes them, real water spouts. The idea of a fountain being *dangerous* can hardly be conceived by those of us who have seen only the paltry demonstrations of this department of the fine arts, which are made to issue from the lips of a shapeless stone fish, or huge rock lion, or nameless monstrosity of the Satyr order, or a would-be nymph, done in plaster, perhaps—in which the whole stream of water is carried by a half inch leaden pipe, and with no more force than might be repressed with a single finger.

Various articles of the more practical kind I shall not meddle with, lest some of your readers should discover my ignorance of such matters—it were wiser to make proclamation of ignorance at once upon the great moot point of "hard pressed and porous soils," than to assume that the delicate spongioles and tender fibers of the dear little plants, enjoyed an exquisite excitement in being forced to overcome the obstacles presented by hard rammed clay; for you would soon discover that your meddlesome correspondent knew nothing about the matter. Neither shall I attempt to decide upon the merits of

the Diana grape, not having had the honor of being one of the committee of forty called to test it last month—no—I leave that to you and Mr. Longworth, being satisfied that he who has for fifty years been spending his talents, time and money upon the cultivation of grapes and strawberries, with such excellent results for us the people, will not allow us to suffer for want of the Diana, if it will prove meritorious after trial.

In his review of Miss Cooper's charming work, he has cheated me out of one of my most delightful anticipations, that of reviewing it for you; but he has done good service by the notice—his influence will induce many to read it who would have turned from it so soon as they found it no story book, and in this way they will have forced upon them a delicious morsel they might never have thought of tasting. May their perceptions of the beautiful in Nature be thereby quickened, and, as a matter of course, they will be rendered better and happier.

Mr. Downing's leader, in this number, "The Favorite Poison of America," is, however, the article which is most attractive, as most coincident with my own notions: for it I feel constrained to extend a hand across lake and mountain, to give him the grip of fellowship. You are right, Mr. Downing—wage war on the stoves. Oh, that we had some chivalrous Knight, armed with battle-ax and mace, ready to march across every valley and hill of the country, through every street and alley of our cities, destroying, as he went, those villainous stoves, the Demons of the Castle of Hypochondriasis, as good old John Bunyan would probably have called them, had he lived in this degenerate age of pale faces and hot stove rooms. With such a destroying champion of our cause abroad, ah, what music would resound in our ears, from kitchen and cellar, from parlor and chamber, as the stalwart blows fell upon

"air-tight" and "ten-plate," cooking-stove, coal-range and furnace! Who would not sue for the honor of Knight-errantry in such a cause, and believe that he could still do his country some good service under such a leader!

In serious truth, we fear the worst effects from the deleterious influences pointed out by Mr. Downing. It is a growing evil, far more serious in the Eastern States than we in the West can well imagine. In my visits to an eastern city, the loss of the open fires is everywhere oppressively felt—furnaces, furnaces, nothing but furnaces—no bright, cheerful fires to enliven the scene—all dull and gloomy, exhausted and exhausting, reminding one of something as different as possible from what you gardeners call a *damp stove*, I believe—a something, the existence of which is problematical, and which, for vegetation, would probably be nonsensical—a *dry stove*—which I sincerely hope is not yet invented, except to hatch chickens.

In the parlors of my eastern friends, there were elegant pictures and beautiful flowers, and devoted lovers of these specimens of the fine arts; but they had discarded that which is far more beautiful than pictures or flowers, the bright, breathing, sparkling, crackling, *open wood fire*. What picture, by Rubens or Guido, can equal it in its colors? what flower, not even the *Victoria regina*, can compare with its life and varying change? Still, amid all the dry heat that every where prevailed, there was one dear old lady, who was not to be turned, e'en by fashion's irresistible force, from the gratification of her more refined and less highly *educated* taste, but who kept the old open wood fire, with straight sticks of dry hickory, the picture of old fashioned neatness and comfort, the hearth neatly swept, and the andirons with their brass balls burnished as brightly as though they were representing the satellites of Jupiter. Alas!

where now are those nice brasses?—banished from the parlor. I loved this old lady for her quaint persistence in the olden ways—it struck a cord of sympathy in my own heart, which vibrates afresh as I sit here now, in front of a blazing fire. The frost has wrapped all nature, without, in his cerements of death; the wind sings his mournful requiem of summer gone, and the very fallen leaves rustle as they drift closer and closer together in the shelter of some little shrub in every sheltered nook; but within, all is cheerful and gay—the fire crackles and rejoices, and the cricket on the hearth comes forth with his merry and contented notes. *Hearths, too*; what are to become of them and their genial associations of social ties and social joys! are they all to be swept away? and for what? what new happiness have you with which to replace them? When far away from home, where does fancy picture dear ones?—surely around the blazing fire.—When memory calls up scenes of early childhood, are they not of the same place, whence we looked up into the faces of dear parents? Yes, the recollections of boyhood and manhood are all connected most pleasantly together at this spot, and the hearth stone becomes sacred to us all—we love it, we cherish it, and, if needs be, we would fight for it.

Good friends, in earnest truth, beware how you cast from you one single source of happiness, one single cause of joy. We have too little of either in this weary life of disappointments, to be reckless of the one or of the other. Economy and neat housekeeping are most excellent good things, and much to be desired; but the pleasures of a refining joy and the joyousness of pure air and consequent good health are infinitely more to be treasured. Then beat down your stoves, brighten up your cheerful hearth stones, and you will find within your own family circle a well-spring of constant happiness.

In conclusion, let us hear what Mr. D. proposes as an alternative for what he looks upon as a hopelessly necessary evil:—

"Is it too much to call it the national poison, this continual atmosphere of close stoves, which, whether traveling or at home, we Americans are content to breathe, as if it were the air of Paradise?"

"We very well know that we have a great many readers who abominate stoves, and whose houses are warmed and ventilated in an excellent manner. But they constitute no appreciable fraction of the vast portion of our countrymen who love stoves—fill their houses with them—are ignorant of their evils, and think ventilation and fresh air physiological chimeras, which may be left to the speculations of doctors and learned men.

"And so every alternate face that one meets in America, has a ghostly paleness about it, that would make a European stare.

"What is to be done? 'Americans will have stoves.' They suit the country, especially the new country; they are cheap, labor-saving, clean. If the more enlightened and better informed throw them aside, the great bulk of the people will not. Stoves are, we are told, in short, essentially democratic and national.

"We answer, let us *ventilate our rooms,*

and learn to live more in the open air. If our countrymen will take poison in with every breath which they inhale in their houses and all their public gatherings, let them *dilate it* largely, and they may escape from a part, at least, of the evils of taking it in such strong doses.

"We have not space here to show in detail the best modes of ventilating now in use. But they may be found described in several works, especially devoted to the subject, published lately. In our volume on *COUNTRY HOUSES*, we have briefly shown, not only the principles of warming rooms, but the most simple and complete modes of ventilation,—from Arnott's chimney valve, which may for a small cost be easily placed in the chimney flue of any room, to Emerson's more complete apparatus, by which the largest apartments, or every room in the largest house, may be warmed and ventilated at the same time, in the most complete and satisfactory manner.

"Pale countrymen and countrywomen, rouse yourselves! Consider that God has given us an atmosphere of pure, salubrious, health-giving air, forty-five miles high, and—*ventilate your houses!*"

BURE-OAK.

Clark County, O., November 15, 1850.

REFORM IN NOMENCLATURE.

If a man talks of VIRGILIUS, or HORATIUS, or JUVENALIS, he is set down in Scotland as a Dominie, and in England as an ass. Yet the naturalist who dares to speak of *Clianth* and *Oncid*, instead of *Clianthus* and *Oncidium*, is regarded as a troublesome innovator; and if he ventures somewhat further, and prefers Bithwort to *Aristolochia*, Tangle to *Fucus*, or Liverwort to *Marchantia*, he may expect to take rank as a scientific Chartist. Nevertheless, the very persons who condemn such modes of speaking would be the first to exclaim against calling *Viturnum opulus* by any other name than Guelders Rose, or *Galanthus nivalis* otherwise than Snowdrop.

How is it that the practice of pedantry among scholars is admitted on all hands to be an offense against good taste, and that the absence of it among naturalists is also looked upon as an offense against good taste?

Why do men thus blow hot and cold with the same breath? How is it that scholars who understand Greek and Latin, drop those languages in English composition, and that naturalists require persons who know nothing of such tongues to be always making grotesque efforts at talking them? This seems to deserve some examination on the part of those who think that natural history should be made interesting to all classes, and identified with their familiar thoughts, a result that will never be arrived at so long as the nomenclature of organized bodies is a chaos of Greek and Latin compounds, whether barbarous or formed upon the soundest principles.

It may be alleged that the practice of adapting classical names to the English tongue is not universal; and that, if we have pruned VIRGILIUS and OVIDIUS down to VIRGIL and OVID, we have left CORNELIUS NEPOS and

QUINTUS CURTIUS in their ancient shape. Why this has happened we know not. Possibly because these names are much less used in conversation than the others, for CORNEL sounds as well as VIRGIL, and would arise out of an application of the same process of curtailment; nor do we see why QUINTIN CURT should be excluded from the language which recognizes QUINTIN DICK. At any rate, among the best authorities, the practice has gone much further than is suspected; in proof of which, we have only to refer to the words Cynosure, Zephyr, Ethiop, Arcady, employed by MILTON and others, or to such names as CEPHISE, HIPPOLYT, ÆSCULAPE, DIAN, CAMILL, and HYACINCT, which are familiar to all readers of SPENCER.

Our good old Saxon tongue consists mainly of words of one or two syllables; and it will always be found that the purest and best English writers shunned long words taken from Greek and Latin. The sonorous but corrupt style of some of our great authors introduced, indeed, a great change in this respect. With them language was—

“English cut on Greek and Latin,
Like fustian heretofore on satin.”

But scholars happily saw the evil of this, and hence the sesquipedalian style has made no progress. Had it been otherwise, we should by this time, like the Germans, have excited the astonishment of the world by words extending across a page. Does any one imagine that our forefathers would have kept even Quercus in their vocabulary, if they had not possessed its equivalent in Ac or Oak; undoubtedly they would have cut it down to Querk in spite of the lawyers. And, in like manner, Fagus would have become Fage, or Fege, or Phege; but they seem to have found a substitute in Beech.

The universal practice of society is to expel technical words from familiar language, wherever it is possible to do so. A naturalist would be laughed at who talked of a *Rana temporaria*, meaning a frog, or of *Curruca Luscinia*, meaning nightingale, or of *Falco fulvus*, or *Aquila chrysaetos*, meaning a golden eagle. Would anything be more preposterous than to call KEENS' Seedling Strawberry, *Frugaria virginiana*, or Sweet Vernal Grass and Cocksfoot, *Anthoxanthum odoratum* and *Dactylis glomerata*? It is only

necessary to allude to such cases to show their extreme absurdity.

The truth is, that all nations like to speak their own language, if they can, and to fashion foreign words to the shape of their own organs of speech as nearly as they find possible; and hence we English have changed TAILLEBOIS into TALBOT, cinqfeuille into cinqfoil, and so on. And we can not but think that those who have kept this in view in modifying the foreign names current in natural history, have acted upon a principle, the soundness of which can not be well disputed. It does not, however, follow that the principle has been judiciously applied. On the contrary, it must be conceded that an error has been committed—that error is translation instead of adaptation. A better course would have been adaptation to the exclusion of translation. The best course is the skillful mixture of the two.

The objection to translated names consists in this—that the naturalist who uses them has to burden his memory with two names instead of one—the vernacular and the technical. And this we take to be the true and only valid objection to translated names, provided the translation is made on correct principles. It must, we think, be admitted that Toothtongue is more conformable to the English Language than *Odontoglossum*, and Cutridge than *Acrotemnus*. Nor is there any thing in such names at variance with the usual construction of English compounds. Objections to them on such a ground are only prejudices. The great fault in Toothtongue and Cutridge is—not that they are badly constructed words, but that they compel the naturalist to recollect them, in addition to *Odontoglossum* and *Acrotemnus*, which are indispensable. Science requires a universal nomenclature, suitable to all countries, and that must be preserved, in addition to any local nomenclature.

We freely admit the force of this objection, and for this reason, but for no other, willingly advise the abandonment of further attempts at translated words—unless in cases where the English equivalent is in general use, as in Birthwort for *Aristolochia*, or Daisy for *Bellis*, or where the technical word is not susceptible of adaptation. We would therefore rest content with Dendrobe for *Dendrobium*, Camarote for *Carmarotis*, and Acro-

teme for *Acrotemnus*. But there is an abundance of cases in which adaptation is impracticable. We may legitimately curtail *Odonoglossum* into *Odontoglossum*, and *Ionopsidium* into *Ionopsid*; but what is to be done with names like *Hypoelytrum*, *Holmskioldia*, *Lusuriaga*, or *Ornithocephalus*? No art can Anglicise them. They must be translated, or changed, or left in their original deformity. This question, however, need not be raised just now, because they are either of rare occurrence or confined to technical science.

We own that this question appears to be one of much public interest; and we shall gladly publish any adverse views with which

our correspondents may favor us. We shall scarcely be suspected of writing to embarrass science. Our real purpose is to make it easy and popular; and we firmly believe that if natural history is not to be locked up in the cabinets of *virtuosi*, its language must be made as familiar as household words. In saying this, we believe that we express the opinion of a vast majority of all classes of society; an opinion in which we are the more confirmed from seeing that a large number of adopted words have already established themselves securely in common language within these few years.

DR. LINDLEY.

CURCULIO EXPERIMENTS

IN the October number of Hovey's Magazine, is a letter from Burlington, Vt., dated August 26, describing some very interesting experiments with these troublesome insects—made by Mrs. Edwin Benedict, of Plattsburgh, N. Y. From them it appears that neither salt, nor lime, nor tobacco-water is sufficiently offensive or deleterious to the insects to prevent their depredation upon plums placed within their reach. Even in the larval state, these substances appear not to have injured them, nor hindered their progress from the fruit to the soil. What then becomes of the beautiful theories so confidently set before the public in support of various plans for destroying the grub, or preventing the attacks of the beetle? Still, instead of being discouraged, we must only try to discover other traits of their history, so as to be able to meet the difficulty more efficiently. For myself, I have more faith in taking advantage of their "instincts," and in the war of extermination, than in any other methods that have been suggested for obviating their ravages. In many cases, the observations recorded were made upon plum trees, that had only accidentally escaped the attacks of the Curculio—hence, when other trees were surrounded by similar

circumstances, they have not often escaped with the same happy immunity, inducing persons, even when they could not doubt the relations made them, at least to despair of success in producing plums in their premises, although adopting similar means to preserve them. Who will take up these suggestions and pursue the investigation next season, so as to endeavor to ascertain further particulars relating to the history of the Curculio, and, if possible, discover a mode of preventing their attacks? At the same time, however, let us have more trials with the knockings. This progressive development of the grubs, observed by Mrs. Benedict, will account for the continued supply of the perfect insect.

Experiment 1. Plums, about one-third grown, punctured, and containing eggs of the Curculio, were placed in a common flower-pot, the last week in June. Soil from the garden about six inches deep in the pot. Fine salt about one quarter of an inch thick on the soil; plums laid on the salt. The grubs came out of the plums, passed through the salt into the soil, and perfect Curculios came out about August first.

Experiment 2. The same as the first, except that fresh air-slacked lime was put on

the surface of the soil instead of salt. Result the same as the first.

Experiment 3. The same as the first, except that the pot was filled with soil only. Result the same.

The pots all stood in the garden, exposed to the weather, which was rather wet with frequent showers. They were all examined at the same time, about five weeks after placing the plums in the pots, when there were insects in every stage of transformation, from the white grubs near the bottom of the pots, to the perfect beetle on the surface, ready to fly. The salt had all washed into the soil, and there was no difference in the appearance of the insects in the three pots.

Experiment 4. Three bowls, one with salt on the surface, one with lime, and one with nothing but the soil, were treated in every respect as the flower-pots in previous experiments, excepting that they were placed under a shed, so as not to be exposed to rains. Results the same.

Experiment 5. Some Curculios were put into a tumbler, with four plums, fresh from the tree, and one covered with fine salt. On the second day the salt was dissolved, so as to leave the plum wet with strong brine, when it was punctured by the insects in many places, and eggs were deposited in the same manner as in the plums not salted. In an-

other tumbler fruit and insects were placed in the same manner, except that one was covered with fresh lime. This was punctured in many places, and eggs deposited the first day.

Mrs. Benedict also made experiments, by covering the soil about one quarter of an inch with fine salt, and placing the grubs as they came from the plums upon the salt. They invariably worked through the salt and went into the soil, in about fifteen minutes, without any apparent injury.

A week ago, Mrs. B. showed me a large covered tumbler, containing garden soil, in which she had placed the grubs taken from the pots of the other experiments, when emptied about three weeks previous; fresh plums were placed upon the soil from time to time. There were many perfect insects among the plums, which were very active—confinement did not appear to annoy them. She dipped one plum in strong tobacco-water, and introduced it into this tumbler, when it was soon punctured like the others. On emptying the soil from the tumbler, I found it filled with insects in every stage of development. The grubs had formed small cells for themselves in a ball of earth about half an inch in diameter, which might be rolled across the table without breaking. Mrs. B. intends to continue her experiments.

DWARF PEARS.

In former times few persons thought of planting pears in small gardens, unless against the gable of a building. It was supposed impossible to grow them as dwarf standards, or mere bushes; and as for the ordinary standard orchard pears, why, if ever they were introduced, they in time smothered a very large portion of the little garden. The notoriously long period, too, that most of them grow before arriving at a bearing-state, gave rise to the expressive old distich:

"He who plants pears,
Plants for his heirs."

Now, however, the case is altered; it is no uncommon thing in these days to find whole rows of dwarf pears in the gardens of our nobility, bearing as freely as the old orchard pear tree, and yet occupying no more ground than a full sized gooseberry bush.

We have had much experience in the dwarfing of pears, having directed our efforts unceasingly to this end for the last twenty

years, and having met with an amount of success second to no person, we therefore proceed to offer advice with boldness. As the subject is necessarily one of considerable extent, we cannot hope to give complete directions (for these we intend to be very explicit) in a single calendar, we must, therefore, divide the subject under the following heads:

1. Stocks, soils, etc.
2. Modes of rearing, training, pruning, etc., in the young state.
3. Modes of pruning and training when in a bearing state.
4. Root pruning.

These divisions of the subject we hope to deal with successively as occasion serves:

1st. **Stocks, SOIL, &c.**—Pears are grown on two kinds of stocks—the ordinary pear-stock, otherwise called a free-stock, and on the quince.

The pear-stock produces a stronger and longer enduring tree; much longer, also, in coming to a bearing state; it will also grow and thrive on soils on which the quince will scarcely exist. This, therefore, is the most proper stock for ordinary orchard pears. A quince stock is notorious for causing the tree to assume a dwarf and bushy character; this is a mere consequence of a much less vigorous root-action. For this very reason the trees come much sooner into bearing, but they require a much more generous soil.

It so happens that some kinds of pears are of delicate growth, or they are such very fine bearers, that it becomes advisable, even under a dwarfing system, to graft them on the free or pear-stock, in order to meet the heavy demands on the tree, or to induce a more vigorous growth. These we will particularize in our select list of pears.

Almost any ordinary soil, if not too sandy, will grow the pear on the free stock. We have known them succeed to admiration on both sandy and clayey loams, on soils of a calcareous (chalky) character, and on shingly or gravelly soils, provided there was some degree of adhesiveness in their constitution. The quince stock, on the contrary, will never answer on hot or sandy soils; and where the quince plant (ungrafted) will not succeed, it is vain to think of planting it when grafted. This fact we would particularly impress on the mind of both the amateur and the cottager; for through a comparative disregard of

such practical facts, the quince stock has most frequently been praised beyond its merits on the one hand, or by far too lightly esteemed on the other. The soil in which, above all others, the quince will both luxuriate and continue in permanency, is a soil which possesses the features of alluvium.* We do not mean that it must be alluvial soil, but that the well known texture of that material must at least be imitated. That this is possible in an artificial way we have long since proved; for we have a *Beurrée d'Arenberg* pear tree on a quince stock, and growing as an ordinary dwarf standard, within a hundred yards of where we are writing. Now we have taken fruit from this tree for years, superior to that from the same kind on a south wall, and that in a northern district, in which it is generally understood that such kinds as the *d'Arenberg* cannot be grown as an ordinary standard with success. The mixture in which this tree was planted was composed of equal parts of strong adhesive loam, black vegetable matter, or humus, (such as is found at the bottom of old wood stacks,) and fine grey sand; in this the quince seems quite at home. Permanency of moisture is one of the main requisites for the quince; indeed, without this no compost can be expected to answer.

When it is taken into consideration how small a quantity of soil will maintain a dwarf pear on a quince stock, it will readily appear that it is quite practicable so to improve the soil in any small garden, as to adapt it to the quince stock. A compost of this kind may be readily got together. The furrowings of low or clay soils might form the principal staple; in addition to which, abundance of old rotten vegetables, tree leaves, or even old and spent tan might be added, and a good sprinkling of any fine sand. These materials, collected a few months previously, and turned a couple of times, would doubtless form a proper compost for the quince. We have even seen ditch-scourings in the neighborhood of trees, which had lain on the bank to mellow for some time, which would alone have been complete, or nearly so, for the cultivation of the quince. A little very old manure would be a benefit, as it is not easy to over excite the quince. As to quantity, we should say that six wheelbarrows

**Alluvium* is fine fertile soil, such as is found in valleys, washed down during the course of many years from the higher-lying lands.

full of this mixed soil would be amply sufficient for a tree on the dwarfing system. The holes should not be made deep, by any means; half a yard in depth of soil will suffice for either the quince or the pear stock, and this should rest, if possible, on impervious materials, such as stones, bricks, or hard-rammed cinder-ashes.

SELECT LIST OF PEARS adapted both to the amateur and the Cottager.—We now proceed to fulfil our promise as to this valuable fruit; but must precede the list with a few observations, which will prove of service to those making a selection. In recommending pears to the cottager, it is indispensable to point only to those which are known as *sure bearers*, and, therefore, profitable kinds. The cottager must be content to give up a point occasionally, as to highly melting properties in the kinds he grows, and even flavor, for the sake of the essential or profit. The sacrifice in this way will not be very considerable; for it so happens that most of our superior modern pears are *sure bearers*. We think it necessary, nevertheless, thus to anticipate objections which may be raised as to some kinds we recommend; for, be it remarked, the evidence concerning this fruit from various parts, is of so contradictory a character, that the high recommendations of a given kind which come from a southern country, with very great difficulty find belief in a northern one.

With regard to the amateur, the case slightly differs. We are aware that bad bearers should not be recommended to any one; still there are some which may be termed tolerably safe bearers, and of which the quality is such, under proper circumstances, that no amateur would like to be without them.

1. *Citron de Carmes* (July). This is a well known early kind, and a good bearer; fruit rather round, and not large; soon mellow. Those who desire a very early pear may plant this, either as a dwarf standard or an ordinary orchard standard.

2. *Jargonelle* (August). As well known as the preceding. This is undoubtedly the best summer pear in the country; the only misfortune is, that it has long shown signs of what is termed "wearing out," the shoots being liable to canker.

3. *Dunmore* (September). This forms a very good successor to the *Jargonelle*, and is

probably a seedling from it. It is a very great bearer, and of a good constitution, and would be worth the cottager's attention as a dwarf standard; or perhaps, as an orchard tree in the more southern counties. The flavor is good, and it is a melting fruit above the middle size. We would particularly advise the amateur to make this a successor in point of season to the *Jargonelle*.

4. *Bartlett* (September). This is a well known standard market pear in the neighborhood of London, and would answer for the same purpose in our northern counties. It is a very good bearer, and strong growing. Fruit long and rather large, but soon decay.

5. *Beurre d'Amalis* (September). This is a very hardy sort, and deserving of extensive cultivation by the cottager, being a very abundant bearer. It is large and melting, and would doubtless prove a good market pear in its season in our northern counties. Suitable either as a dwarf standard or orchard tree in most parts of England.

6. *Fondante d'Automne* (September and October). This is one of the most sugary pears with which we are acquainted; indeed, so rich, that we have not been able to save even one from the depredations of the black birds this summer. It is too small for a cottage pear; but the amateur would do well to have a dwarf standard of this kind, and place a net over it while ripening.

7. *Louise Bonne of Jersey* (October). This is peculiarly a cottager's pear; indeed it is everybody's pear where the garden is very small. Although not particularly high-flavored, it is, nevertheless, an agreeable melting pear; and were it once extensively planted, it would soon take in the markets. Fruit rather long, reddish brown and green, and mottled next the sun; about middle size.

8. *Aston Town* (October and November). An old pear, and at the present day second to none in point of flavor. We think that it will not pay the cottager so well as larger sorts, but no amateur should be without one; they succeed best as ordinary standards. Small in size and round.

9. *Beurré de Capiaumont* (October and November). Of all the free bearers, this is first. We have several dwarf standards no larger than currant bushes, which have never missed a crop for sixteen years. Such bushes yield on an average half a bushel each, at

least, annually. Fruit middle size, cinnamon colored. This would pay well in cottage gardens, and would take in the markets.

10. *Marie Louise* (November). This is so well known as to need little description. It is excelled by none in its season,—indeed, scarcely equalled.

11. *Althorp Crassane* (November). A very good and free bearing tree. Fruit round, middle sized, of a dull, greenish brown. Well adapted for a dwarf standard in the northern counties, or for orchard trees in the south.

12. *Beurré Diel* (November and December). For dwarf standards in the cottager's garden, this pear would, perhaps, prove more profitable than any in the kingdom; for in addition to its free bearing properties, it is of great size, and will keep a good while. Having a goundskin, it would carry well to market. Fruit round, very large; a dull green with some freckles.

13. *Passe Colmar* (December and January). A great bearer, and adapted for dwarf standards in our southern counties. Fruit nearly round, middle sized, and of a pale green. This pear has the desirable property of bearing on the last year's shoots.

14. *Hacon's Incomparable* (December and January). Hardy, and a free bearer; this is everybody's pear. Fruit middle sized, roundish, and of a brownish green. The flavor is good, and it is very melting.

15. *Glout Morceau* (December to February). A robust tree, which will answer well on the quince in our southern counties as a

dwarf standard, but must have a wall or gable in our northern ones. Fruit large, greenish, and keeps well.

16. *Winter Nelis* (November to January). This we consider the finest flavored melting pear in the kingdom. Properly ripened, it is excelled by none, and equalled by few. Fruit smallish round, and of a pale green; leaves of the tree peculiarly small and taper.

17. *Knight's Monarch* (January). A good hardy pear, and very productive. Fruit middle sized, flattish round, of a yellowish brown, and of a somewhat musky flavor. Would answer well as a dwarf standard in most parts, provided it were on a quince stock.

18. *Easter Beurré* (January to March). Much esteemed as a late pear, although it has disappointed many. Of middle size, round and of a lively green.

19. *Beurré Rance* (March to June). This is the best late pear in the country, at least for the amateur. Much, however, depends on the aspect and stock. We should think the quince would be most suitable, and it would succeed with similar aspect and treatment as the Easter Beurré. Fruit long, above middle size, of a dark green color.

20. *Ne plus Meuris* (March and April). An ugly looking fruit, but nevertheless a useful late pear. This deserves a west or east aspect, and should be tried on the quince. Fruit below middle size, nearly round, with clumsy angular protuberances; color greenish brown.

R. ERRINGTON.

Cottage Gardener.

CULTIVATION OF CRANBERRIES.

THE Barnstable Patriot gives a full account of the sixth annual meeting of the Barnstable County Agricultural Society, on the 16th ult. We select the following report:—

This statement of Mr. Edward Thatcher, of Yarmouth, was made to the Committee on Fruit.

The following is a statement of the course pursued by me in the cultivation of the cranberry. July 12, 1845, I purchased, for \$40, one and a half acres of land—about one half a sandy beach, and the remainder a low peat meadow covered with water. A rim of about six feet in width, around the bog and between the water and the beach, had a few cranberry

vines on it, which had been closely fed off. In the spring of 1846, I drained the bog and covered about one-eighth of an acre with sand three inches thick, and set it with cranberry vines in rows two feet apart, and hoed them four times in the season of 1846, and once in the spring of 1847. The grass then got advantage of me, and I left the vines to work their own way. They have now nearly overcome and worked out the grass and rushes. On the remainder of the bog I strewed vines, and trod them in the mud, by walking over them. These grow with rapidity without any further care, except flowing in the winter. In the fall of 1848, I gathered from ten rods,

where no sand had been spread, as many bushels of cranberries, while on the part sanded I had scarcely as many quarts. The latter are now doing better, having got the advantage of the grass, and I think will finally work it out. I have this year, on the quarter of an acre offered for premium, quite a good crop, although the worms destroyed nearly one half. I have picked one square rod of the light-colored variety, set in the mud, and it yielded two bushels and twelve quarts. One square rod of the small dark-colored variety, on the mud, yielded one bushel and two quarts. The large red variety yielded on the mud two bushels to the square rod. The whole quarter is not yet gathered; it will yield about thirty-five bushels, about one half of the vines being set on mud, and one half on sand.

In selecting meadow for cranberries, it is highly necessary to select such as will not dry in summer; but much also depends on the selection of the vines, as the Committee will see by the samples here presented, all having the same soil and the same treatment. *The samples are not selected, but sent in precisely as they grew.* The whole expense on the above bog up to the present time does not exceed \$40.

I have received from the sales of cranberries, up to the fall of 1849, \$320 00

Deduct for picking, one-fourth, 80 00

All other expenses, for setting, interest, etc. 40 00
120 00

Net profit, 200 00

EDWARD THATCHER.

Yarmouth Port, Oct. 15, 1850.

We know not why it is that so little attention is paid to the cranberry in this country. In the eastern part of the State it is considered a valuable crop, and one raised without difficulty. There is a great abundance of land in almost all our towns, and especially all those bordering on the Housic or Housatonic Rivers, well adapted to this fruit. Indeed, any ground which will produce corn, it has been said, will produce good cranberries. Still, their native place seems to be in low grounds. That its cultivation is profitable, there can, as we think, be no doubt. Nor is there any danger of an over-supply. The price might become less, but improved methods of culture and implements for gathering would enable the article to be afforded at a lower price; and if that was the case, the consumption would increase with the supply. We should like to see some of the grounds which are now completely worthless, producing their fifty or one hundred dollars per acre, in cranberries. We should like to see the hardhack give place to the cranberry, having the utmost confidence that it could not be less profitable.—*Culturist and Gaz.*

SHEFFIELD CELERY CULTURE.

From a former communication, you are already aware that a very great improvement is being made in the growth of celery in this neighborhood (Sheffield); and as I have been the most successful cultivator in this neighborhood, it perhaps may be the best plan in describing that cultivation, to give my own method of growing it, making a few remarks as I proceed.

In the first place, "good seed is everything;" when I say good seed, I mean good seed of a good kind, I have been a cultivator of celery for fifteen years, and I have found that so much difference exists in the kind of seed you sow, that one will bear no comparison with the other, so much so, that I have but two kinds (both red) under the same

treatment, the one I could only grow to 5 lbs. weights, and the other 11 lbs. 7 ozs. when divested of all the lateral shoots, etc.

Having obtained seed of the right kind, it should be sown in a seed pan, in a good compost, or good soil, slightly covering the seed over with the same; it should then be placed in a frame or green house, the heat to be about 70 or 75 degrees; when the seed is up and got into "rough leaf," as it is generally termed, the seedlings should be taken up, and those intended for the first planting should be transplanted into pots, five inches across the top, and one plant in each pot, using a compost of old "spent" manure, and a little earth of a light quality. They should then be put in the frame or green house again, still keeping

them as warm as before for about a week; after this, air should be given them by degrees, a little more every day to harden them ready for final planting out.

Those intended for the second planting, may be planted in a frame on a compost as before named, at a distance of four inches apart; after these have taken root they may be exposed to the air by degrees, till the grass is left altogether.

Having got the plants four or five inches high and very "stiff," they are ready for final planting in the trenches in the open air, which I recommend to be as follows:

The trench should be seven inches deep (not more) and two feet wide. I am fully aware that many persons will differ in opinion with me on this point; they will say, dig the trenches twelve inches deep and twelve inches wide. I have tried both, and experience teaches me the former is the best. I had long been of opinion that celery made more side roots than tap roots; and if such was the case, all manure placed below where the roots extended was of no use whatever. To the truth of this opinion I arrived at in the following manner this year; I dug my trench seven inches deep and fifteen inches wide, and when the celery had attained the height of twenty or twenty-four inches, I took the earth from the edges of the trench, and found the roots had got to the sides of the trench. I then made my trench wide and placed more manure, so that my trench was more than twenty four inches wide. The result was (with the way I treated it hereafter named) I had the finest celery this locality ever produced.

Having dug the trench as before stated, it should filled up to the top with good stable manure (in such a state that it may be cut with a spade), cover the manure with soil to the depth of one and a half inch. If the plants are in pots take them out of the pots with all the compost adhering to them; plant them twelve or fifteen inches apart. This should be done about the beginning of May; those intended for the second planting (the plants that have been transplanted in the frame), should be planted from nine to twelve inches apart; (I prefer the latter). If the weather should be very dry and hot, the plants ought to be protected in the day from the scorching sun, water should be given freely after sunset, from a rose-water pan. After

the plants have got "hold" or commenced growing, they will need no protection from the sun; but take care to water pretty freely with clean water if the weather is hot and dry.

After the plants have attained the height of twelve inches they will require to be tied round with a little bast matting, or any thing of a softish texture, but care must be taken not to tie them too tight, taking off all the lateral shoots as the plants grow. After having been tied up for some time, it will be necessary to untie them, and tie them again a little higher, taking off all the lateral shoots and superfluous stems before tying them again. They may then be suffered grow until they have attained the height of from twenty to twenty-two inches. Care should be taken that they do not suffer for want of water. After having attained the above height, and are well cleared of lateral shoots, they should then be earthed about three inches high, and tied a little higher with matting (the tying is only done to prevent the wind and wet from breaking the outer stems). After having earthed them about twice, three inches at a time, I would water them once a week with the ammonia fixed in liquid manure, but still keep watering with clear water if dry weather (I have tried ammonia fixed in liquid manure for prize gooseberries, and it has answered well). As the plants grow they may be earthed up a little at a time, taking care not to earth them over the center of the heart, or they will be very likely to rot at the core.

In conclusion, I must remark, that nearly all depends on the kind of celery you would grow. I have grown white of two or three kinds, including Seymour's, Lion's Paw, etc. I have grown red in greater varieties, but the best kind I have been able to meet with is "Nutt's Champion." I have found this superior to any I have grown for *size*, *flavor* and *rapidity of growth*; and I am of opinion that were it more extensively grown, it would prove itself if not the *first* sort, second to *none*. Celery ought to be planted where it can get plenty of air; it never does well if grown near peas, beans, etc., as they have a tendency to draw it. I would also say in using ammonia fixed in liquid manure, it must not be used too frequently, once in six or eight days is sufficient. I use it extensively for many things, and believe it might be used with great advantage if properly "fixed" and

properly applied, and was it more extensively used it would be more appreciated.

Neepsend, Sheffield. JNO. TURNER.
Cottage Gardener.

REMARK.—The ammonia may be “fixed” by using oil of vitriol, or sulphate of lime, as suggested by Liebig. Celery must not be planted so early in this country, as it will not bear our hot, dry summers.—ED.

SEA KALE.

BEING one of those who enjoy good things from the vegetable garden, the following practical and simple directions are given, in the hope that some may adopt them with benefit, and furnish the result for publication.

THE soil should be good, well manured, trenched, and pulverized. If intended to be raised from seed, lay the ground down level in the month of April, after the winter's trenching, choosing suitable weather for the operation; draw drills, (if the kale is to stand on the same ground permanently to be forced, or otherwise blanched,) three feet apart in the rows. This will allow room to get between them in the growing season, to apply soakings of liquid manure, which sea kale delights in. Liquid manure from the piggery, cow-house, stable, sheep-shed, or brewed from the excrements of animals, or from guano with a good portion of salt, at all times dissolved in it, is what the growth of sea kale may be wonderfully improved by. The strength and the frequency of such applications must be regulated by the strength of the plants, and the season of their application. For instance, at the commencement of the growing season, the liquid manure should be of moderate strength; as the plants gain strength with the advancement of the season, so should stronger soakings of liquid manure be applied. The same rule holds good with all applications of liquid manure, either in the open field, garden, hot-house, green-house, or frame, and it should always be applied in as clear a state as possible; for we have observed much mischief and stagnation caused to vegetation, both in fruit and plant culture, by sudden strong muddy applications of liquid manure: and so we have by applications of too strong liquid manure to such vegetation. Fruits and plants which have only had a meager, or poor pre-

parative made for them, and to such as are diseased, or in a weak state, strong applications of liquid manure is a ready way to still more weaken or to destroy them.

Planting.—If the ground is to be planted with sea kale to stand permanently, choose one year old plants from a poor piece of ground, no matter how small they are, so that they are clean from canker and the distorted, crooked swellings, caused in them by wounds from a variety of the cauliflower grub. Plant them in rows three feet apart. Insert the plants singly, and not as formerly practiced—two or three plants in a bunch, for they then are exhausted and starve each other.

There are so many ways of producing good sea kale, and some of them so easy and simple, that we may imagine almost any amateur, or cottager, who can spare a small corner to grow a few plants, may have the pleasure of enjoying good sea kale in those winter and spring months, when good vegetables are scarce. A cellar, or bottom of a dark cupboard, or any dark corner, are excellent places for producing early shoots of it, if planted in sand, old tan, leaf or other light vegetable soil, or even in common garden earth. The plants should, of course, be kept as much in the dark as possible, if intended to be blanched, but for our own eating, we do not object to its being a little colored. Strong plants should be taken up, or secured for such places, and no matter how close they are placed. Water them occasionally with tepid water, and two or three crops of excellent sea kale may be obtained in succession before the plants are exhausted. We are at this time cutting at Bicton, the third crop from plants put in a cellar-like place in November last, and a very fair and good production it is. Those who do not choose to place the plants on the floor of their cellar, cupboard, or such like place, could put them in boxes filled with any of the above named kinds of materials. Those who have not a cellar or cupboard, and have a dark corner in a stable, cow-house, wood-house, or any other such house, could produce good sea kale from a few strong roots placed in a rough-made box, as above directed, and have the pleasure of enjoying a luxury in early spring; but to all those who have cellars under ground, as in London, and other large towns, nothing could be more easy or

simple, than producing first rate, well blanched sea kale and good rhubarb, too, in abundance, all winter and spring. Of course rhubarb has no objection to the light, although it may be produced of excellent quality in darkness. Thus, any cook, or other servant, by strong plants which may be obtained easily enough, and at a reasonable rate, too, could produce those articles of as good quality as the best gardener. Indeed, any one who has the convenience, and will carry out our simple directions, may enjoy those vegetables in abundance, and at a season of the year, when, to be purchased, a high price has to be paid for them. I have often wondered why the simple way of producing sea kale and rhubarb has not, ere this, come more into general practice, as, to our knowledge, it has been to a limited extent in practice for these last twenty-five years; although, perhaps, it has not been made known enough for the million to be benefitted by its simplicity. For our own part, we keep no secrets which would be likely to benefit others, as we observe abundant space to extend our humble ideas in search of further information in other matters, having never yet seen any thing of man's production so perfect, but could be still further improved.—*Collage Gardener*.

OUR NATIVE FLOWERS.

ALL true lovers of nature will agree with the writer of the following extract from the *Gardeners' Almanac*—the few native flowers he mentions are all *cultivated* in this country, and familiar to most of us. Will not some of our botanists, or gardeners, inform the readers of the *Review* of the habits and best modes of cultivating some of our own wild flowers, which are, many of them, so beautiful?

Perhaps some of our readers would dissent from the proposition that beauty, not variety, is the first quality to be desired in the tenants of our parterres,—and for ourselves, we have no hesitation in saying, that that gardener should not have the direction of our flower-borders who rejected the beautiful because it was common, to make room for the more insignificant, merely because it was scarce. No, we prefer before all other considerations, beauty of color, beauty of form, and excel-

lence of fragrance. Moreover, we are not of those who admire most that which costs most—but on the contrary, we should be best delighted to save every guinea we could from being expended upon the tenants of out-door departments, in order that we might have that guinea to spare upon our stove and greenhouse, the denizens in which must, beyond escape, be excellent in proportion to their costliness. We make these observations, because we happen to know that effect the most beautiful may be obtained by the aid of our native plants; and we have seen rustic seats looking gay, yet refreshing, from their profuse clothing of our *vinca minor* and *major*, and we will venture to wager a Persian melon against a pompon, that half the amateur gardeners of England would not recognize these flowers in their cultivated dwelling place. Again—if any one wishes to have the soil beneath his shrubberies gladsome in early spring, let him introduce that pretty page-like flower, the wood-anemones to wave and flourish over the primroses and violets. Let him have there, also, and in his borders too, the blue and the white forget-me-not, *Myosotis palustris*, and *M. alba*. We will venture the same wager, that not a tithe of our readers ever saw that last named gay little native. Mr. Paxton's observation applies to them both when he says, as a border flower it has very high characteristics:—it only requires planting in a moist soil, slightly sheltered and shaded, to become a truly brilliant object;—it is equally good for forcing—very valuable for bouquets—and alike fit for windows, green houses, borders, and beds. Under favorable cultivation, its blossoms increase in size nearly one half. The plants only require to be divided annually, and to have the flower-spikes cut off as the lower florets decay. By thus preventing their seeding, a very protracted display of bloom is obtained. These are not a hundredth part of the native flowers which might be introduced with the happiest effect into our gardens. We have seen the broom, the honeysuckle, and the holly, blended with raven shrubs, and aiding the best conceptions of the landscape gardener;—and we have seen whole garlands of flowers, in which not one exotic was interwoven, so beautiful, that none culled from our choicest stove plants could have much excelled them.

Care and Management of Tender Roses.

THE following article is taken from the Commercial; our modest friend has a great deal of practical knowledge of the subject upon which he writes, and he should be willing to render his aid to our endeavors to cultivate the taste for beautiful flowers; as it is, he cannot hide his light under a bushel, but must be brought out. The readers of the Review will, no doubt, be glad to hear from him frequently, as his long experience in the management of a small collection of parlor plants will give value to what he has to tell them.

In speaking of roses, I am naturally and almost involuntarily led to a contemplation of the almost endless and interminable variety of that interesting flower. Of the great diversified family of flowers, with which a bountiful Providence has so liberally and interestingly clothed both garden, field and forest, I conceive none more eminently beautiful than the Rose. The labor and toil of the cultivator is seldom, if ever, more liberally compensated than when directed to its suitable culture and fostering care.

The Rose is a native of America, Europe, Africa, and Asia. None, I believe, have yet been found in Australia.

The number and variety of Roses would almost shock the credulity of any one who had not lent their attention to them. I think that more than an hundred distinct species have already been described, and in the nurseries more than two thousand named varieties can now be procured.

Roses that have been kept in pots during the summer, will, by this time, have so entirely and completely exhausted the nutriment from the soil in which they have been growing, as to render it indispensably necessary that the soil should be changed in order to keep them in a healthy condition. You should therefore re-pot them into fresh and suitable compost, as the best means of promoting their growth and advancement. The most suitable compost for the Rose is equal parts of pure sand, rich loam, and well rotted manure. Such roses as have been growing in the open ground, and are designed to be removed during the severe and inclement sea-

son so near at hand, into your parlor, should now be lifted and potted.

Roses which you intend leaving in the ground during the winter, will require a suitable protection from the rigor of the season; this should be attended to by the last of the present month, as further procrastination would be unsafe.

There are a variety of methods adopted for the purpose of protecting them; some do so by tying a piece of matting around them, some by simply placing an empty barrel with one head out, over them, others by different means. Such of my roses as I have left out during winter, I have protected by means of a straw covering, and have found it to do well in all instances, I feel willing to recommend it as being a very safe and suitable plan, and one in which I would be most willing to confide.

I take three, four or five stakes, or more, if the plants are very large, regulating the number by the quantity and weight of straw to be used in covering them. Place the stakes firmly and securely in the ground, bringing the tops of them together, so that when thatched, or covered with the straw, it will be in the shape of a sugar loaf; this will constitute a covering which will cause the water to run off freely, and also prevent it from settling immediately around the roots of the plants, which, if permitted, would be decidedly detrimental to them.

Permit me here to remark, that before setting the stakes for the reception of the thatch, that a small portion of old manure should be placed immediately around the roots of the rose, for the two-fold purpose of preventing the roots from freezing, and for preventing a too sudden thaw, when a change of weather takes place. It is not so much the freezing of half hardy plants that injures them, as a sudden thawing of them.

In lifting your plants or roses from the ground, much care is necessary to prevent injury to them; you should permit as much soil to adhere to the roots as possible, and should you inadvertently break or seriously bruise a root in lifting them, remove the broken or bruised part immediately by means of a sharp knife.

One of the consequences of lifting your roses will most probably be the entire loss of their foliage. Be careful to water them spar-

ingly until they begin to vegetate; and, indeed, you should allow them but a small quantity until they commence a vigorous and active growth. Many persons look upon it as a harbinger of ill, for rose plants to lose their foliage; I differ entirely with them in that opinion, and conceive that they are much improved in their condition, and are quite benefitted by it; as a proof of which, I have always left my plants out until the action of the frost upon them had divested them of their foliage entirely.

I might name a few of the best known varieties, according to my own fancy, but I deem

that unnecessary. The great diversity of taste is such, that what one considers beautiful, another would not regard as interesting or elegant.

I will take the liberty of recommending all lovers of roses to take a stroll on the Reading road, a mile or a mile and a half from the city, where you will meet with many new and elegant varieties of this family of plants, as well as very courteous and polite attentions, either from Mr. John Sayers or Mr. William Heaven, at their gardens.

THOMAS SHEREN.

Jackson st., Cincinnati, Nov. 1, 1850.

THE FRONTISPIECE.

In the progressive development of our country—as the villages increase in size and become towns—the disappearance of country habits, and the loss of country air, begin to be felt by the inhabitants—but they can always reach the delights of the country by a few minutes ride or walk. In the continued progress of the so called “improvements,” however, when the town becomes a city, extending its area over miles instead of acres, the crowded avenues, and the thickly studded houses, banish all ideas of rural pleasures, and the poor citizen begins to find himself excluded from all remnants of the country life. This is particularly the case in a city like ours, which has grown up with a rapidity that can hardly be realized, and which never was anticipated,—and where there has been no forethought to provide delightful parks or public squares, to purify the air,—hence arises the necessity of providing *country residences* as delightful retreats from the dust, noise, and turmoil of the city.

In the neighborhood of this city, nature has done every thing in the way of variety of surface and picturesque beauty—leaving to man only the delightful task of occupying, orna-

menting, and enjoying the beautiful sites which present themselves in every direction.

The frontispiece represents a cottage at Clifton, the residence of the Editor, and was drawn by our friend H. P. Gengembre. The reader must pardon the apparent egotism of presenting our own dwelling among the first, but we desire in our illustrations to exhibit the different styles—and having given the Italian in a former number, we now offer you the Rustic Cottage, again expecting to follow in succeeding numbers with examples of the Italian, and other styles.

This cottage is built upon a bold promontory overlooking the beautiful valley of Mill Creek, stretching from beneath our very feet far off into the distance, and bounded by a range of hills, which forms the horizon for many miles. The style was selected as that most appropriate to the abrupt character of the surface upon which it is built:—the steep roof and acute gables coinciding with the slopes about them. The roof projecting beyond the gables, beside forming a bold, overhanging eave, and the whole being surrounded by a simple drop or verge board. The piazza is of the simplest construction, and supported

by lattices for vines, instead of more expensive columns. This feature, perhaps, is not in accordance with the cottage style, but is so necessary to comfort and enjoyment in the country, that it could not be dispensed with.

The construction of the porch at the front door, is as simple as that of the piazza, the roof being made of flooring boards, slightly inclined, and sustained by a trellis for vines and climbing roses.

The walls are constructed of rough stones, presenting an uneven face, just as they were broken by the sledge hammer, or as they were found in the quarry, and thus possessed of some variety of color—having different shades of bluish and yellowish gray;—the interstices or joints between them are pointed with mortar, as a finish to the work. The surface is consequently quite rough, and admirably adapted to the growth of climbing plants, one of the prettiest of which is the five leaved creeper—*Amplionis quinquefolia*—so desirable in this new country, on account of the rapidity with which the effect is produced, and so beautiful with its rich crimson and scarlet foliage in the autumn. This is the plant known in New York as the Virginia creeper.

The inner surface of the walls were not used by the plasterer, but the process called *furring off* has been adopted, by means of which an air-chamber is secured, that effectually prevents the dampness so common to stone houses.

The windows are large, being formed of two or more sets of sash in each frame. This has been objected to as not in consonance with the style of the cottage, but was introduced on another account;—the small panes of a cottage window, and the increased number of the styles, must interfere with a favorite view to some extent, but the long panes of glass, as here arranged, allow the eye to wander over the landscape without so much

interruption, and then, too, by a judicious arrangement, the heavier cross bars at the junction of the upper and lower sash, may be brought above the range of the eye of the beholder from within, instead of being just opposite to it. From without, the cottage window presents a very pleasant appearance, but my preference is decidedly for the larger range of vision afforded by the long panes of glass, uninterrupted by the cross bars.

The external appearance of this building, is that of a one-storied cottage, and such it really is, the eaves being less than sixteen feet from the ground; but the steepness of the roof enables us to make fine airy chambers, the ceilings of which are nine feet from the floor, in the greater extent of the rooms, and no part is so low as to be inconvenient; above them there is quite a good attic, and an air chamber above that.

The dimensions of this building are too small—being thirty-two feet each way—but every one must suit himself in the details—that is, if he is obliged to build a house with limited means, he must contract his plans accordingly;—the space is here divided into four apartments on each floor, counting the hall as one; the lower part of the house is appropriated partly to a cellar, and the rest to basement rooms.

The view from the point where the house is situated, being the chief beauty and characteristic of the place, we have endeavored by the selection of the style of the building,—harmonizing with the surrounding surface, the whole simple and subdued,—to detract as little as possible from that grand end. We do not desire so much to be looked *at*, as to be looked *from*, and in this way we hope our friends will always be pleased to view our humble cottage, within its doors or without, and forget its simplicity in the magnificent view offered for their enjoyment by the liberal hand of nature.

STATE BOARD OF AGRICULTURE

THE Board of Agriculture for Ohio, met at Columbus on the 4th inst., to make their reports, and to have the delegates from the county agricultural societies select persons to fill the vacancies in the Board. In the afternoon there was a convention of the delegates, who, upon the first ballot, *with remarkable unanimity*, declared that Messrs. J. G. Gest, Arthur Watts, C. Springer, and J. M. Edwards, retiring members of the Board, should be reinstated for the term of two years, with Allen Trimble, a former member, in the place of M. Bateham, also one of the five whose term of office expired at this time. Mr. S. Hollaway was then chosen to serve one year, to fill the vacancy caused by the death of D. Lapham. This result somewhat astonished the uninitiated, who could scarcely suppose that thirty delegates from all parts of the State could have been so united in a choice, and so willing to relinquish their sectional feelings of regard for some of their own men who might have aspirings to serve the public in this very important post. The inference is plain, that the re-appointed members were very popular men, and were considered too important to the interests of Agriculture, for the people to dispense with their services. To a mere looker-on, the result was unaccountable, and *almost* forced the belief that the fabulous "*tin-pan*," of our Capital is no fiction, but a stern reality.

The result of the election having been announced, the Board was again organized and resumed the execution of their arduous duties, after appointing M. Sullivant their President, and J. G. Gest, Secretary. One of the first acts, was a confirmation of a resolution adopted by the delegates to appoint Prof. Mather to the post of Corresponding Secretary and State Chemist; an excellent

selection, as he is already familiar with the geology of the country. This will give the Board a permanent officer at Columbus, who will be constantly engaged in collecting specimens of agriculture and mechanics, and diffusing information throughout the State, as well as in analyzing soils and other substances for all applicants who may choose to demand his chemical talents, for a suitable remuneration. This will become a very important office, and will constitute a sort of Agricultural Bureau.

During the discussions of the State Board of Agriculture, it was agreed that the proceedings of the Pomological Congress should be printed among the annual reports, and as this may be delayed for some months, permission was granted for the editor of this paper to furnish its readers with extracts in the ensuing numbers; at the same time a very flattering resolution was adopted, recommending the Western Horticultural Review to the support of the agriculturists and horticulturists of the State. Assurances were also given that the Legislature should be requested to modify the law, so as to permit all Horticultural societies to have a voice in the selection of the members of the State Board of Agriculture, a measure of but common justice to those organizations and one which will only place them in a proper relative position to the agricultural societies, the two arts being complimentary one to the other.

The gentlemen who are engaged in this great enterprise, have a very arduous task to perform and need the support of the people of our State. They have done well with the first State Fair, and promise to do much better with the next, which they propose to hold at Columbus.

SELECTION OF APPLES FOR MARKETING.

A correspondent inquires what selection he shall make in planting an orchard of one thousand trees for the St. Louis market.

The answer will depend, first upon a knowledge of the success which has already attended the cultivation of various sorts in any given neighborhood, and next upon the taste of the people in the market it is intended to supply.

The following list and the proportionate numbers of each kind, are suggested :

- 200 Rawle's Janet,
- 200 Pryor's Red,
- 200 Newtown Pippin,
- 50 Golden Russet,
- 35 Newtown Spitzenburgh,
- 15 Fall Pippins,
- 100 { Gilpin,
- Michael Henry and Smith's Cider.
- 25 Yellow Bellefleur.
- 25 White Do.
- 25 { Early Strawberry, Williams' Fa-
- vorite, Harvest, Benoni, Bohanon,
- Gravenstein,
- 25 Cooper, and Rome Beauty.
- 25 Rambo,
- 25 Gate or Belmont, and Fameuse,
- 50 Any others that are not of the "re-
- jected."

Several of the varieties thus recommended are not first rate fruit, but they have qualities which render them valuable for market. The three at the head of the list are all prolific, firm and sound, bearing transportation well, and have an established good character.—The Golden Russet, Fall Pippin, and Oxeye, or Newtown Spitzenburgh, erroneously called Dutch Vandervere in the reports of last number, are three of the very best, and no orchard is complete without them; they are, however, often less profitable at a higher price than some of quite inferior sorts that are more prolific, more even in size, and which are less apt to fall off; such are the Gilpin,

Michael Henry Pippin, and Smith's Cider, which always bear well, commence bearing when quite young, and are well known to purchasers. The color of the first and last is a great recommendation in some markets. Yellow Bellefleur is not by any means a first rate apple, but it will always sell in any market, and often at fifty per cent. higher price than any other apple. The greatest objection to it as a market fruit is that it is so tender as not to bear carriage, being most easily bruised.

The white Bellefleur, known here as the Detroit, and so good an apple as to have twenty synonyms, is deficient in color, but will always sell where known, and though not a rich apple, is very light and very palatable. For early apples, unless very near a market, the list given above will be more than enough. The Early Joe promises to be more favorably received than some of those now cultivated, but has not yet been tested here.

The Cooper, Rome Beauty, Rambo and Gate, will form an excellent selection for autumn and early winter, and their beauty and size will recommend them in the market, while the excellent properties of some will sustain any reputation founded upon their good looks.

Fifty trees are appropriated in this list to a collection of half as many sorts, which should be tried, for the benefit of those who are to plant after us. Among these should be many of the new varieties recently brought into notice, but not sufficiently tested to warrant their being extensively planted in our orchards.

It is questionable whether, in growing fruit for market, especially for shipping to a distance, this list will not be too extensive, and whether it will not be better to plant only

two or three of the kinds which have been fully tested in any neighborhood, as best adapted to it, and also possessing the requisite market qualifications. Mr. Pell, of New York, plants the Newtown Pippin almost exclusively. In the West and for a Southern market, the Rawle's Janet and Pryor's Red, and, perhaps, the Ribston Pippin and Hubbardston Nonsuch, or Baldwin, will be most saleable from their color, and other good qualities. The latter have scarcely been proved here sufficiently to decide upon their adaptation to our climate. So also, with the

Northern Spy, recommended as a good keeper, and destined probably to take the place of the Roxbury or Putnam Russet, the Pennock and the American Pippin, or Grindstone, which have nothing else to recommend them but their keeping properties.

Take care also to look over the rejected lists;—for though some apples may have been thrown aside, which are good market fruits in particular localities, still the united observation of many cultivators has decided that they are inferior, and others will be more profitable.

THE SWEDISH CHERRY.

CLEVELAND, Nov. 25th, 1850.

J. A. WARDE, M. D.,

Editor of the Western Horticulturist:

DEAR SIR:—The first and second numbers of your interesting publication are received. It affords me great pleasure to congratulate the public on the favorable *debut* of a Journal so much needed in the West.

In the report of the Fruit Committee of the Cincinnati Horticultural Society, on the 42d page of your first number, "The Swedish cherry of Dr. Kirtland," is mentioned in such a manner, that your readers would infer that it was a seedling of mine. Such is not the fact. In the autumn of 1824 I introduced it into Ohio, from Burlington, N. J., where it was then cultivated under the name of *Swedish*, and it was catalogued as such, by M'Mahon, at Philadelphia, as early as the commencement of the present century.

Experience decides it to be identical with the *Early White Heart*, of Downing, Cole & Thomas, and these are strong reasons to suspect that Bowyer's Early Heart, and River's Early Amber, are also the same. It

has more recently been introduced into this country from Europe, under the name employed by those authors, but whether it should precede that of Swedish, I can not decide.

The fruit can rank only as second or third rate; but its time of ripening, prolificness, and especially its capability of surviving late vernal frosts, render it worthy of cultivation in localities where other more valuable, but less hardy varieties, do not succeed.

The Purple Guigne (*German Mayduke of Columbus*) matures from ten to fourteen days earlier, and is more popular as a market fruit, though it is not an abundant bearer.

A seedling of mine, described by Mr. Elliott, in Vol. 11, of the *Horticulturist*, page 123, as "*The Doctor*," also ripens about one week earlier than the first named—is of equal size and prolificness, and is superior in flavor.

It is a matter of surprise, that the finer varieties of the cherry are so little cultivated in this State, except in the vicinity of Cleveland, and a few other localities in this section. No insuperable obstacles supervene to prevent their successful growth in every part of

Ohio, provided proper attention be paid to the selection of *soil, exposure, and the quality* of the trees.

These are points of primary importance.

In my grounds the cherry thrives as well or better than the apple and pear. The orchards are located on one of the ancient terraces formed by Lake Erie—situated at this time one hundred and fifty feet higher than the surface of the water.

The soil is made up of debris of a silicious formation, mixed with broken down argillaceous shale, and was the drift thrown up at some period from the Lake. It is composed of a small per cent. of lime, some more potash, and magnesia, but mainly of (argil) and silex, in the form of sand, gravel and shale, variously intermixed. Correctly speaking, it is a *Riddle formation*, which permits water to percolate freely through it, before reaching a more tenacious sub-soil at the depth of from three to fifteen feet.

I am careful to notice these particulars, for I impute the universal healthiness of my cherry trees principally to the character of this formation. Whenever I have set trees in a more retentive soil, though only a few feet from this terrace, I have found them soon to become diseased, especially where the sub-soil abounded with superfluous moisture. Ultimately they would be attacked with canker, effusion of gum, and death of extensive portions of bark.

The exposure of the location is another point to be regarded. With us, where the Lake tempers the weather, during both winter and summer, it is of less consequence than in the interior. A cherry tree will bear steady cold weather during winter, as well as the oak, and will sustain itself equally well under the drouths of summer, but is peculiarly sensitive to sudden alternations of heat and cold.

Its fruit-buds, in the latitude of Ohio, are never killed during winter, unless they have

been prematurely excited into action by previous warm weather.

A late autumnal growth, is a fruitful pre-disposing cause of disease in the tree, and destruction of its fruit-buds—though less to be dreaded than the occurrence of untimely vernal frosts, when the sap of the tree is in active circulation, and the blossoms have expanded. Either, may not only destroy the crop of fruit for the ensuing season, but also impair the health of the trees. Six years since a spring frost occurred in this favored locality, that cut off most of the cherries, and at the same time induced disease and death in many of the trees. The full effects were not manifested till near the close of the season. Trees fully exposed to the impression of the sun suffered most, while those standing on a northern exposure, and shielded from the south, entirely escaped injury of either fruits or health. Such a frost is very unusual here, though common in the interior.

A third cause of disease in the cherry tree, is the employing of suckers for stocks, or of trees that have been forced into premature growth in the nurseries by manure.

Suckers rarely fail to show evidences of disease about the time they begin to bear fruit, and all forced trees will ultimately disappoint the expectations of the cultivator.

These hints may, perhaps, be practically employed by the Horticulturists in your vicinity in selecting soil, exposure and trees.

Extensive tracts of suitable formation, are afforded by your *Second Bottom* lands. They are made up of sand and gravel, and are improved by the lime they contain. Like the Lake terraces, they allow of a free transmission of water through them.

Where such do not abound, dry side-hills should be selected, and prepared by deep and extensive under-draining.

All stimulating animal manures should be carefully withheld. A top dressing, with

leached ashes, covered with muck or decayed tanners' bark, is all the application that should be made to the soil.

If possible, select a northern exposure—if not, protect the bodies of the trees from the impression of sun during autumn, winter and spring, by artificial means. *A summer's sun never injured the bark of a cherry tree*, though a previous injury from frost and sun may first show itself during summer.

Buildings, fences, or other kinds of trees, may occasionally protect the cherry—but in other instances it may be necessary to employ matting, or encasements of boards.

Procure trees that have been propagated on Mazard seedlings, and that have not been forced into unnatural and unhealthy growth.

In a subsequent communication, I may refer to the varieties best adapted to cultivation. Very respectfully, yours,

JARED P. KIRTLAND.

REMARKS.—Many thanks to our cherry friend, for his hints and criticisms. His Horticultural communications are always welcomed by western readers, but whatever he says about cherries, may be received as though it were a dictum ex cathedra, since he is acknowledged to have more knowledge of this branch of Pomology than almost any other man in the West.

The readers of the Review will welcome this earnest of the Doctor's good intentions toward them, and anticipate with pleasure the restoration of his health, so that he may be enabled to gratify them with further information upon his favorite topics.

The cherry of which mention is made on page forty-two, was procured from Dr. K., but it is evident that it is not the variety he supposes—but a large Bigarreau; these errors will occur in labeling, even with the most careful.—Ed.

THE VERBENA—ITS CULTIVATION AND VARIETIES.

Among the floral gems of the present day, the Verbena claims our particular attention. Indeed, it has become indispensable to the smallest collection, and is alone capable of forming a handsome flower garden; so different and numerous are the varieties, embracing almost every shade of color, from pure white to the richest crimson. In addition to its variety of color, habits, etc., many varieties possess an agreeable fragrance, particularly that class which has sprung from the old white or tucroides.

If I should be limited to the cultivation of the Rose or Verbena, I should scarcely know how to decide in the selection.

The Verbena will grow, and sometimes do well under very indifferent cultivation—forming masses of perpetual bloom from May to

November, without any care or attention. But, like every thing else, it will do much better with good cultivation and proper soil. The Verbena will grow on almost any soil; but a good mellow loam, made deep and rich, I have found to suit it best. The most uncongenial situation seems to be a close dry soil, that packs hard after rain, and soon becomes dry on the surface.

A soil of such a nature can soon be made suitable by applying to the surface a little mellow earth incorporated with some rotten manure; two or three inches will help the cause much, but six inches would do better. In a stiff soil the Verbena seems to require something on the surface to induce it to throw out new roots from the young shoots as they extend themselves along the ground. Dur-

ing dry weather the Verbena is much benefited by a good watering once or twice a week.

The propagation of the Verbena is so simple, that I scarce need say any thing on that head. For potting, to keep over winter, I prefer to take up some portions of the old plants about the middle of August, or first of September, and transplant them in a piece of mellow ground. They will soon take root and make nice strong plants with plenty of fibrous roots, by the time they are needed for potting. Or they may be taken up from the old plants when wanted to pot, or may be rooted from cuttings. In keeping the Verbenas through the winter, they require as much sun and air as possible, and just water enough to keep them from wilting.

A little frost will not hurt them if they get plenty of sun and air. I have found the hardier they are kept through the winter, the better they flower in the spring,—and they are better adapted to planting out in the ground, which may be done safely as soon as the hard frosts are over. The following list is believed to embrace the best varieties now in cultivation. Many of them are seedlings that have been raised in this vicinity, and some of them have never been named yet, but are cultivated and known by the numbers attached. After growing them side by side with the finest of the eastern and European varieties, and comparing them together, I find them equal to the best, and quite distinct in color, habit, etc. The following list contains only twenty-five varieties, but it is believed to be enough for general cultivation;

they are all distinct and fine. Some three or four of them are quite new, and have not been thoroughly tested, but I believe from what I have seen of them, that they will prove well worthy of cultivation.

Those printed in *Italics* are for a collection of twelve of the best and most distinct.

- No. 13 of Heaven, finest Crimson.*
- Stevensiana, " Rosy crimson.
- Fritz, " Lilac.
- Tyrian Purple, finest of its color.*
- Splendens, Scarlet.
- No. 6 of Sayers—Pink.
- No. 4, " Purplish lilac.
- No. 11, " Lilac—white eye.
- No. 1, " Maroon and crimson.
- Kossuth, pink, with white eye—finest of its class.*
- Bem, rosy Pink—fine.*
- Lilacine, Lilac—fragrant.
- Snowflake—finest White.*
- Magnificent—Blush, white eye; fine.*
- Mrs. Sedam—Crimson purple, dark eye.
- Juno, Purplish red—very fragrant.
- Defiance, Scarlet—finest of its class.*
- Satellite, Crimson scarlet—fine.*
- Exquisite, Reddish scarlet, with white and crimson eye.
- Beauty Supreme, Salmon pink—fine.*
- Blue Bonnet, approaches nearer to Blue than any other variety.*
- Major Ringgold, dark Rose, blackish eye.
- Bicolor, Reddish scarlet, with dark center.
- Wilsonii, Purple—a very free bloomer.
- Queen, White, sometimes tinged with blush—fragrant.

In describing the shades, I have attempted to convey, as nearly as possible, my own ideas of their colors, which I find extremely difficult, they are so nicely blended and mingled together.

JOHN SAYERS.

Cottage Garden, Dec., 1850.

THE ART OF TREE POUNDING.

A gentleman at Chillicothe gave me an account very recently, of his large crops of plums which were saved from Curculio by pounding the tree. But he killed his trees,

by loosening the bark—a result which he would have looked for, had he ever made willow whistles in his youth. I see that Mr. Resor has found the same difficulty, although he

cushioned his mallet. When a carpenter wishes to pound against a smooth surface without injuring it, he interposes a block and strikes that. The *tree pounder* should do the same thing, and if his block be concave next the tree and also lined, the injury will be but slight.

URBAN.

Pheasant Ridge, Dec. 2, 1850.

Another Practice against the Curculio.

A gentleman from a neighboring county, upon whose veracity I can rely, has informed me, that in a vicinity where the curculio has been uniformly destructive, he has been entirely successful in saving his crop for nine successive years, by the following simple method:

The soil under the trees is kept smoothly cultivated, and every spring about the beginning of May, or immediately on the dropping of the blossom, he takes away the earth as far as the branches extend to the depth of three inches, and replaces it by fresh soil obtained away from the haunts of the insect. The removed earth is thrown into the hog-pen, where the insects are soon destroyed, and in a few months it becomes excellent manure.

The reason *why* this should be a remedy, seems obvious enough after the fact is stated. The curculio does not rise out of the earth before the fruit is formed, but has made its way from below to the surface, to begin operations as soon as there is anything for him to do;—and carrying him off in the surface soil, at this hopeful period of his existence, is a coup de main for which he is not prepared.

If contrary facts should turn this practice over among repudiated remedies, I have the consolation of knowing that it will find itself among a very large circle of relatives.

Toledo, O.

F. J. S.

From the Ohio Cultivator.

Pomological Congress and Cooper Apple.

"Decided against the Cooper apple, did they," said Mrs. Jones the other night at the sewing circle, as she lifted her needle and thread a little nearer the nice white home made tallow candle. "Decided against the Cooper apple, did they, in their Pomological Congress.

"I wish that Doctor—what d'y'e call him? from Illinois was here to-night, and I think we would make him rescind his resolutions. Wonder if he, or that other Mr. Somebody you were telling about, ever ate a real Cooper apple—as huge a specimen as this—picked just when it was ripe, and kept till it was a little riper, mellow, juicy and rich, with its half crimson, half scarlet tint on one side, and its bright pea green, verging into yellow and gold, on the other. If they had, they never would have thought of its condemnation. No, and they never could have eaten one of them baked, or made into a pie, or have taken a bushel of them to market among the Pear-mains, Seek-no-further and Gilli-flowers, and witnessed the avidity with which they were sought out—the willingness to pay a little *extra* for the Coopers. If they had, they never would have voted down the Cooper apple. But I believe in woman's rights, and surely the housewife ought to know as well as her husband what apple is the most palatable and useful in all ways; and I move, ladies, that we get up a congress of women, and pass resolutions:—

"1. '*Resolved*, That the *Cooper apple* is a rich, juicy apple, good for cooking, and surpassed by none for the table from September till Christmas; and that we therefore recommend it to all the farmers and nursery men of southern Ohio as a fall apple well worthy of cultivation.

"2. '*Resolved*, That whenever our husbands or sons set out a new orchard we will require them to put out at least six good Cooper apple trees, for the benefit of the family in particular and the neighborhood in general, because every body loves them.'

"There, ladies, how many of you will say 'aye' to these resolutions? Every one of you? *Well*, that is better than I expected. Let us just set ourselves about it, and stand by our favorites, the Cooper and the Pear-main, and all the Pomological Congressmen

in the Union can not drive them out of our neighborhood."

FRANCES D. GAGE.

REMARKS.

The Editor of the Horticultural Review, sends his compliments to Mrs. G., and hopes that she will embrace the opportunity hereby offered, to communicate her horticultural effusions to the public through these pages. A woman who can descant so fluently and so eloquently upon the merits of the Cooper apple, must be well informed upon other departments of this delightful art: and her contributions will be read with interest. Her fancy for woman's rights, would, no doubt, be gratified were she to see how large a portion not only of the preparation, but also of the honors and decisions is performed by the women of Delaware Co., Pa., as appears in the printed report of their flourishing *Institute*, which has just come to hand.

ROSES FOR ROSE-WATER.

In the "Pharmaceutical Journal," of London, is a series of articles on medicinal plants, and their cultivation, from which extracts will prove interesting and useful, as we may find it advantageous to establish a "*Physic Garden*" in this country, so much better adapted than England, to the growth of many medicinal plants; among these the rose, the aconite, and the poppy, will probably be the first to claim attention. The following extract relates to the first named, and the directions will apply very nearly to our climate, except that the crop will come off earlier. The Mitcham referred to lies in Surrey, England.

Two sorts of Roses are cultivated at Mitcham, namely—one known there as the *Damask Rose*, and which Dr. Pereira states to be the *Rosa Gallica*, var. *officinalis*, De Candolle; and the second called at Mitcham the *Provence*, or *Cabbage Rose*, and which, ac-

ording to Dr. Pereira, is the *Rosa centifolia*, var. *vulgaris foliacea*, De Candolle.

Mr. Moore (in 1805) states that—

"The ground is prepared in the same manner as for lavender and liquorice, and the roses, planted three feet asunder, are kept well cleaned and hoed, and in the autumn all the superfluous and dead shoots are cut out, and the ground dug between them. Every other year they are refreshed with twenty-four loads of spit dung, pointed in between them close to the roots."

The following is the mode of cultivation as now practiced by Mr. Arthur:—

1. The Damask or French Rose—*Rosa Gallica*, var. *officinalis* De Cand.

These roses are planted in rows a yard apart, with about eighteen inches between the plants. The time for planting is autumn or spring. They are propagated by dividing the roots, and also from suckers or runners, which throw up fresh plants. After about three years the plant is liable to be attacked by an insect, the maggot of which destroys the leaves and the young buds. It is, therefore, usual to renew the plantation every two or three years. Some fresh plants are grown every year, only the best of the old stock being preserved. After the fourth year the plants are worth nothing. The tops of the plants are cut every year with shears, to encourage the growth of new shoots. Roses will grow either in a light or heavy soil, but they flourish best when the soil is rather heavy.

The season for gathering the flowers of the Damask rose commences early in June, and lasts about five or six weeks. They are gathered by women and children twice a day, in order to secure the buds before they are too much expanded. The buds are dried in stoves in the same manner as camomiles, except those required for conserve, which are sent to market in a fresh state.

2. The Provence or Cabbage Rose—*Rosa centifolia*, var. *vulgaris foliacea*.

These roses are propagated by dividing the roots, and the mode of cultivation resembles, in most respects, that which is adopted with the other variety. They are not, however, liable to the maggot, and the plants are therefore not renewed so often. They continue to flourish for many years. They require more care in pruning, the old wood being cut away

with a knife, which causes new shoots to be formed, and it is these latter which produce the flowers.

The gathering usually commences the last week in June, and is continued for about five weeks. The flowers being used in the expanded state, they are gathered every other day, which is found to be often enough.

In our climate, on account of the greater heat of the sun, it would be necessary to gather every day.—*Ed.*

In the process of distillation, it is a common practice to put the entire flowers into the still as received from the grower, but the result is much improved by rejecting the calyx. This is rather troublesome, as each flower must be separately stripped, which occupies considerable time, and increases the expense; but the labor is well bestowed, as the water is much more fragrant. During the distillation a quantity of concrete essential oil floats on the water, which, when collected and filtered, resembles the foreign otto of roses. We have seen about half an ounce, which resulted from the distillation of one hundred and fifty gallons of rose water. The quantity, however, is too small to be worth collecting for sale, and it is generally supposed that its abstraction impoverishes the water; and that, although the water is saturated at the time, it afterward dissolves by degrees the essential oil which is left floating in it. The water should be strained before it is used, as the particles of oil are likely to produce irritation, especially when the water is used for eye lotions.

LABELING PLANTS.

THE importance of having all plants, including fruit trees, properly named, even in small gardens, cannot be too clearly pointed out. A plant may have beautiful foliage and flowers, but without a name it yields comparatively little interest. Every plant has a history of its own, and the first step toward obtaining a knowledge of that history is its name; the next, its native country and year of introduction into our gardens. A garden of plants without names is like a library of books without their exterior superscriptions. Numbers are only useful to nurserymen. All garden plants should be properly named. The season of propagation is chiefly when plants are out of bloom, and the want of dili-

gent care in retaining their names too frequently leads to a confused nomenclature. The vast numbers of new plants which are being continually introduced, as well as the host of garden varieties every year brought under the amateur's notice, are quite perplexing to him, unless constant attention to correct labeling is observed. Then, again, with regard to fruits, how much uncertainty would be removed, by keeping labels of a permanent kind to every tree! Small gardens cannot, or ought not, to find room for indifferent kinds of fruit, or uncertain bearers; hence the importance and the advantage of knowing every kind we cultivate. How much trouble is thereby avoided! for it frequently happens that the difficulty and expense of obtaining the name of a single fruit are much greater than the attention necessary in keeping the names to the small collection, which the limited space of a suburban garden admits.

With respect to the particular kind of label which is most desirable to employ, there is a good deal of uncertainty. Some persons prefer some of the new kinds now in existence, while others adhere to the old wooden label, which, after all, has not yet been very satisfactorily superseded; whatever kind of material is employed, however, the names should be accurately and distinctly written.

Granite Farmer.

REMARKS.—The best mode that we have ever seen for marking trees, either on labels or stakes for nurseries, is that recommended in the American Fruit Book, by cutting notches. These labels are easily made; the materials are always at hand; the system is so simple that a child will learn it in five minutes. By hanging the labels with wire, they will last twelve or fifteen years; and by writing the name on the label, it may be easily read, and the numbers by notches may be relied on when the writing has faded; and the name may be removed occasionally, if necessary, as it fades, by whittling the label again and writing anew. It is the simplest, cheapest, most convenient, and most reliable mode for reading readily, and preserving the name permanently.—*ED. N. E. FARMER.*

REMARKS.

The experience of some of our gardeners has led them to prefer zinc labels to all

others. They may be procured for a few cents per pound. The sheet zinc is cut into strips varying in width from a quarter to three-quarters of an inch, and cut to any length from three to six inches. These are pliable, and may be bent around a side limb or twig, where they will remain for years without injury to the tree, as the growing limb causes the loop to expand, and is not cut as by a wire. For pot plants they may be pushed into the soil. The ink to be used on this label is made according to the subjoined directions, and will remain perfectly legible for many years.

INK FOR ZINC LABELS.

"Take one drachm of verdigris,
 " one " of sal ammoniac,
 " one half " of lampblack,
 " ten " of water."

Mix all well together, by shaking in a bottle, and the ink is fit for use, with a quill pen. It may need an occasional shaking, if it have been left standing for some time. The chemical action corrodes the zinc wherever applied, and the charcoal is nicely deposited upon the new surface, where it remains fixed.

ED. REVIEW.

Extracts from the Cottage Gardener.

GREENHOUSES.—Of all the departments of gardening, perhaps there are none of more interest to a retired family than that afforded by a small greenhouse, more particularly so if the greenhouse is attached to the dwelling-house and the female members of the family are fond of rearing plants. At any rate, a small greenhouse would very much extend the sources of enjoyment to be procured from a garden. Persons who have not paid any attention to this subject themselves have little idea of the variety of plants which a small greenhouse is calculated to afford, at perhaps little or no more expense than what is often incurred with a three or four-light pit with a flue in it. The trouble of lighting a fire is the same in both instances: the work of attendance is more troublesome where plants are wintered in a pit, for they are more liable

to damps and other injuries there, than in a greenhouse, where they can be kept drier and looked over in bad weather when nothing can be done out of doors. When one has got over the difficulty of incurring the necessary expense of erecting a greenhouse and fixed on the situation, the next great difficulty is, how to plan the house itself, what elevation the glass should have, what the arrangements inside as to shelves, stages, paths, flues, etc. It has often been objected to by books and gardeners, that no two of them agree about the mode of even planning and arranging such a small concern as an ordinary greenhouse. And the objection is valid enough to a certain extent; but it may be asked, if two of any other craft agree in any thing but on some main points or certain fixed principles? Will two physicians, for instance, agree in prescribing for a patient? or two engineers in laying down a rail road? It is quite enough if men who have studied a profession, or any branch of knowledge, agree in the fundamental principles of their art. Matters of detail are always more or less guided by fancy and convenience. If two gardeners are agreed as to the strength and durability of the timber, the kind of glass best suited to the purpose, and the best aspect and slant, or inclination of the roof, they may differ as to all other points in the edifice they produce, but each will erect a good greenhouse.

The best aspect for either a greenhouse or pit is south; but east or west aspects will answer. The angle of the roof is best when low, say about thirty degrees; the width inside from twelve to fourteen feet. Greenhouse plants always do best when the roof is pitched low. The usual objection to low roofs is, that the wind will drive in the rain between the glass; but that is easily got over by having the laps of the panes puttied. A higher angle for the roof than thirty degrees is apt to draw the plants too much to one side. You always see nurserymen, who are good judges of what is best for their plants, use flat roofs to their greenhouses. The roof sashes should be in two lengths, and the top ones one-third shorter than the bottom ones; they will thus be lighter for sliding up and down in giving air to the house. A better plan, however, would be to have all the roof lights or sashes fixed, and in that case they would be better in one length, but that could only be done well when a good

dry shed is placed against the wall, behind the greenhouse; into this shed large openings might be made at the top of the back wall for giving air. One of the greenhouses here (Shrubland Park) is thus constructed, and answers very well. The lights have never been moved since they were put on, ten years since. Indeed, this very house and shed may be described as an example of one very economical and useful for an amateur. This house is twelve feet wide inside, the back of it thirteen feet high, and the front six feet, consisting of two and a half feet of brickwork and the rest of glass, the front sashes move on hinges, by which they are fastened to the top plate, and when opened for giving air, are retained in their position by a thin piece of flat iron, fifteen inches long, fastened to the bottom frame of each sash. This flat handle, as I may call it, is pierced with ten holes along the center, about an inch apart, and there is an iron pin, one and a half inch long, fixed in the lower wall-plate, which fits these holes. Now, when you want to give air you take hold of this handle, lift it from the pin, and push out the sash with it, say to the length of six holes, drop down the handle then over the iron pin, and your light stands open six or eight inches wide. No wind or accident can alter it backward or forward till the handle is let go off the pin. There is nothing in this contrivance to get out of order, and it is the simplest thing possible. All the front sashes may be opened to fourteen inches wide, and with the door open, the plants are nearly as free as if they were in the open air. The roof sashes are all fixed, and just under the top angle there is an opening into the back shed under each light. These openings are three feet long and a foot wide, without any shutters to them; there they are wide open day and night, winter and summer. The shed behind is always dry, being used to hold large myrtles, fuchsias, etc., during the winter, and as a painter's shop and lumber-room in summer, so that the current of dry air plays over the plants all the year round. When the shed and greenhouse are closely shut up in frosty weather, the current of air goes on nearly as strong as when all is open, by a very simple contrivance. The floor of the shed is six inches lower at one end, and here a hole is made through into the greenhouse; this hole is directly over the furnace, which heats the

greenhouse flue. As the air cools in the shed, it rolls down to this opening, and is sucked into the greenhouse by the heat of the furnace; it then ascends over the plants till it escapes into the shed again by the top openings. I may state also for the economy of the thing, that what we call the back wall is only made up of posts and strong boards, plastered over on the greenhouse side, and whitewashed with lime on the shed side, and being always kept dry will last a lifetime.

A shelf, thirty inches wide, runs along the front and one end of this greenhouse, and under this shelf the flue passes all the way; the shelf is two feet three inches high from the level of the path—the bearers which support it being cross-pieces let into the second course of brickwork next the top; the shelf thus standing on brick lower than the front glass. The path ought to be two feet ten inches wide, or if you give it a yard, it will be better. Recollect there will be a shelf on each side of it; and when your friends come to see your success in growing plants, they have to walk, stand, or turn round in the path; and if there are ladies in the party, their dresses are sure to be made so full that a narrow path will not allow them to pass without pulling down your pots and plants on either side of the way, and instead of getting any praise for your plants and for the laying-out of your new greenhouse, you will be told, and very properly too, that "you have made a poking place of it after all." Let us therefore have a wide, comfortable path at any rate, though by doing so we encroach a little on the shelves. The front shelf need not be wider than eighteen inches, just to cover over the flue, if you are tied for room, as no tall plants should occupy that part for fear of intercepting the light from the rest of the plants. The roof sashes are best made four feet wide, or as near to that as the size of the glass will allow; let them be made of the best red deal, primed, and once painted before the glazing is done. The reason for giving two coats of paint is, that after the glass is in there must be no more painting allowed for full three months. Now, if you contract with a builder to erect the house, recollect to enter this clause about the painting in the specification, as he will be sure to urge you to finish it off at once. The reason for the three month's delay is that the putty may get dry throughout before it is fit to be paint-

ed. Of course you will be told this is all fancy, and that ninety-nine persons out of a hundred never think of such a thing, and that a little white lead mixed with the putty will make it *set* hard in a few days; and so it would, but have nothing to do with that sort of putty; gardeners never allow the use of that old kind of putty in these days, because once it gets dry they can hardly cut it when repairs or alterations are to be made afterwards. I have seen a good glazier break four squares of glass trying to mend one broken one, besides spending an hour and a half at the job, which a mere lad could do in five minutes, and without any breakage, if proper putty had been used in the first instance. Hothouse putty is made with whiting, pounded down and sifted very fine, and boiled linseed-oil, making it into dough as the bakers do their bread; the more the dough of putty is worked the better it will be, and it should be at least ten days old before it is used; in that time a large lump of it will "sweat," that is, slightly ferment, which is necessary to give it the proper adhesive power. When this soft putty, as it is called, is allowed to dry thoroughly before it is painted over, it will last as long as the hardest white lead putty, and at the end of twenty years be soft enough to cut away with your knife. If, therefore, you wished to remove your greenhouse at any future time, you could easily take out the glass, pack it in boxes, and the timber-work could then be handled and packed without the risk or annoyance of breaking the glass. We often see very neat well-built greenhouses in all respects, except that the putty having been painted over as soon as the lights were glazed gives way the second season, the paint having blistered, not being able to fix or unite with the putty in a green or damp state. Then the rains drip in between the putty and the glass in all directions. Now, to guard against this every-day occurrence is the reason for my dwelling so long on such minute details. To say that this, that, or the other, should or should not be done, without assigning reasons for what you say, is no proof that the party giving such directions is any judge of what he recommends or condemns. In making the shelves for the body of the house, the lowest shelf ought to be on a level with the front one, and the others carried up in regular gradations, according to the slope of the roof. If

the house is detached from other buildings, both ends should be glazed above the level of the shelves. The door is to be at one end and the fire place behind the door, the flue passing under the path within the doorway, and on reaching the front wall, to rise with a gentle slope, and to be carried nearly on a level along the front wall, and within two inches of it, and to pass along to the furthest end of the house into a chimney in the corner. The size of the flue to be nine inches wide and fourteen inches deep, made with bricks set on edge, and on no account to be plastered inside or out. The top and bottom of the flue to be made with thick tiles, called "foot-pammments," the bottom ones resting on flat bricks to clear them from the ground; the fire place would be more effective, and less liable to warp with the heat, if it has a "double" door, that is, by having a plain square piece of half inch thick iron riveted to the inside of it, and two inches apart from the inside of the door; this is a simple and very useful contrivance, but often neglected. British sheet glass, sixteen ounces to the foot, is the best kind to use; the width of the panes for the roof sashes should be about eight or ten inches wide, and from a foot to eighteen inches long. For the front sashes the glass may be much larger every way. This kind of glass is sold in boxes, containing a hundred feet of glass each, and sold from 2½d. to 3d. per foot. Sashes of the best red deal are generally made by contract, at about 6d. per square foot; but the price, no doubt, varies in different parts of the country, but this will be sufficient to form a guess at what the sashes and glass will cost, for nothing of this kind ought to be attempted before every item of the expense is first ascertained. One suggestion more, and I have done. If the house is made by contract, let the contractor be responsible for the efficiency of the whole for the first twelve months.

D. BEATON.

PRUNING THE RASPBERRY.—Early autumn pruning is of benefit to the raspberry, which, being of an excitable character, begins to swell betimes in the spring; and pruning after the buds are swelled is always at the expense of the vigor of the plant. The pruning of this fruit is very simple indeed. The plants produce their fruit on long rods of the previous year's growth; at least the ordinary

kind does. What is termed the double-bearing or autumnal raspberry produces fruit on wood of the same summer's growth.

It is the practice in June to go over the raspberry bushes and thin the young suckers or rods, for they in general produce so abundantly, that they would become confused, and the character of the fruit would be materially injured. About half a dozen of the best are left to select from, and it now becomes necessary to reduce this number. We think that four good rods are better than more; this, however, depends on the strength of the soil, and more especially its continued moisture, even in summer, which is an essential with the raspberry and the black-currant, as we before observed. If any of the stools or parent plants are very weakly, they must be allowed a less number of shoots; some three, others only two, and in some *very weakly* roots, it is necessary to cut them entirely down, in order to strengthen them for the ensuing year. In selecting the canes, the strongest must in the main be preferred. It is worthy of remark, however, that when they are very gross indeed, some of the canes are liable to produce side branches during the season they are springing. Such must be cut away, for, although so promising in appearance, they will not produce such nice fruit as those of a reasonable amount of strength, and, indeed, prove of too monopolist a character,—drawing too much of the sap into their huge vessels. About five feet is the greatest height to which the raspberry canes should be cut; our practice is, however, to cut the canes at different lengths. Thus, suppose four canes on a stool, we cut the strongest to five feet, the second in point of strength to four feet six inches, the third to four feet, and the fourth to a little more than three feet. Now, as the top buds grow stronger, it follows by this arrangement, that the young fruit-bearing shoots, which grow from the canes, are more equally divided and enjoy more room, and, of course, more light. Such completes the winter's pruning, after which the canes must be staked, and the soil about them top-dressed. The top-dressing we consider an important matter in their cultivation. As we have not space to complete our remarks on this useful fruit, we must reserve them for a little while, when we will give the general culture more at large.

R. ERRINGTON.

GROWING HYACINTHS IN MOSS.—The hyacinth will grow in flower pots filled with fresh moss as well as in a compost of good mold. The bulbs will be as little exhausted the one way as the other, and they are less liable to injury in moss than in soil, but in water they are always much weakened and difficult to restore afterward. Indeed, unless they are very carefully attended to in glasses of water, they seldom recover at all. One great advantage of growing them in moss would be, that several bulbs might be planted together in a wide-mouthed jar, or any ornamental vessel, and, owing to the lightness of the moss, they might be carried to any part of the house or room at pleasure. Their colors might thus be finely contrasted or arranged in any fanciful device, and make quite a flower-bed on the center of a table.

GROWING HYACINTHS IN WATER GLASSES.—The safest way to proceed with bulbs of any sort intended to flower in glasses full of water, is to plant them first in loose sandy soil till they make roots at least three inches long; these should also be in the dark during the first stage of growth; they may then have the soil or sand washed off them, and their roots introduced carefully into a glass containing luke-warm water, the water being only high enough to stand clear of the bottom of the bulb; every four or five days the water must be renewed, and always in a luke-warm state. Dark-colored glasses are said to be better than light ones, and the reason why they are so is feasible enough, the roots growing stronger the darker they are kept; but I think this is all fancy, for I never could perceive any difference, whatever kind of glass was used. But why not have different colored glasses as well as different colored flowers? At any rate, the experiment is worth trying fairly; but gardeners have too much business on hand to do the thing properly; and if it is to be proved at all it must be done by an amateur.

HORSE RADISH should now be trenched out, and replanted again at two feet distance from row to row. In planting, trench the ground two feet deep, and place the crowns, which make the best sets, at the bottom, one foot apart, leaving the soil in ridges to be forked over, and pulverized by the action of the winter's frost.

IVY (J. G.)—Lose not a day in planting slips of this beautiful evergreen. Cut the young branches into lengths, about six inches long, and leaving four joints, as well as some of the root like fibers by which they attach themselves to walls. Remove the leaves from the three lower joints, and plant in a north or south shaded border, burying the three lower joints in the soil. They will be strong, well-rooted plants by next summer, and ready for removal. If the place where you require the ivy has a north aspect, or is well shaded, you may plant the cuttings there at once.

METEOROLOGICAL TABLE.

CINCINNATI, NOVEMBER, 1850.

THERMOMETER.			WEATHER.			RAIN.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.	
1	53	72	clear	clear	clear	.20
2	48	74	do	do	rain	
3	55	70	fog, clear	do	clear	
4	61	74	clear	do	do	
5	54	75	do	do	do	.10
6	50	64	cloudy	cloudy	cloudy	
7	42	49	clear	clear	cl'y, rain	
8	38	50	do	do	clear	
9	33	56	fog, clear	do	do	.25
10	44	52	clear	do	cloudy	
11	47	58	cloudy	cl'y rain	rain	
12	46	59	clear	clear	clear	
13	35	51	fog	do	do	.10
14	36	59	fog, clear	do	do	
15	44	54	do	do	do	
16	32	37	fog, snow	variable	cloudy	
17	31	35	do	clear	clear	.10
18	30	46	clear	do	do	
19	36	44	fog	variable	do	
20	27	44	fog, clear	clear	do	
21	27	38	do do	do	do	.10
22	32	38	fog, cl'y	drizzle	drizzle	
23	36	37	do	cloudy	cloudy	
24	33	52	variable	clear	clear	
25	42	62	do	variable	cloudy	1.10
26	58	61	cloudy	rain	rain	
27	58	66	cl'y rain,	variable	do	
28	62	67	cloudy	clear	clear	
29	39	49	clear	do	do	.85
30	30	51	do	do	do	
Inches.....						2.60
Nov. 16th, Snow, Inches.....						.05
" 17th, " ".....						1.40
Clear days in the month.....						15
Variable (cloudy at times).....						11
Cloudy (sun not visible).....						4
						30

Mean temp. of minimums.....41.65
do. do. maximums.....54.80

Rain and snow water, Inches.....	2.70
Mean temperature of the month.....	48.22
Do do Nov. 1849.....	50.83
Do do do 1848.....	39.76
Do do do 1847.....	47.60
Do do do 1846.....	47.14
Do do do 1845.....	44.87
Do do do 1844.....	46.83
Mean of Nov. in the above 7 years.....	46.43
Maximum tem., 5th inst.....	75.00
Minimum do 26th do.....	27.00
Range.....	48.00

REMARKS.—A large proportion of remarkable pleasant weather in the three autumnal months, but unusually dry.

Calms more or less on 20 days of this month.

Light breezes more or less on 28 do.

Brisk breezes on part of 5 do.

No high winds in the month.

Prevailing wind W. and S. W., varying to all points of the compass. JOHN LEA.

The following notes are by Dr. J. Ray, reported for the Atlas, to which paper he has for many years contributed his valuable meteorological observations. The rains have come, and the river has risen to a very good stage already.

Autumn of 1850.

AUTUMN, in meteorological reckoning, is the period from September 1st to December 1st—91 days. The characteristic feature of this period the present year has been the dry weather, the whole amount of rain being only 5.81 inches; while the average for the same period during the last sixteen years is 10.2 inches. The aggregate amount of rain however, was not only much less than usual, but the greater portion fell in the beginning of September and near the close of November. For a period of sixty-eight days, viz., from September 18th to November 26th, there fell only one and six-tenths (1.6) inches of rain. Thus in a period nearly equal to one-fifth of the year, we had less than one-thirtieth of the annual amount of rain. The effect of this drouth has been quite manifest in empty cisterns, dry wells, and the low state of the Ohio and Mississippi rivers and their tributary streams. Unless the amount of rain in December is much greater than usual, the Ohio river must continue low, which will strengthen the probability of its being frozen over during the present winter.

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UNIV. OF
CALIFORNIA



Drawn on Stone by H. P. Gengebree

W. HISSOR'S GREENHOUSE
CLIFTON.



VOL. I.

JANUARY, 1851.

No. 4.

ON THE COLOR OF CITY HOUSES.

KIND readers, what say you to a social chat upon a topic which some of you may think has little to do with *Gardening* or *Horticulture*, *Arboriculture* or *rural taste*, to wit, the subject which forms the caption of this article? With all due deference, then, to my country readers—I mean those of them who were not, whilom, “*cits*” themselves, I shall assume that these things do affect them, and have much to do with *rural taste*. We are imitative creatures, and bad models may be and have been followed by those whom we might suppose least likely to be affected by them. So the staid dweller of the quiet country, leaving his rural shades, even transiently, and coming to the busy throng of a city, can not fail to be influenced by many of the impressions received in his contact with concentrated mind and man, and, unconsciously perhaps, carries back to his rustic retreat new notions of taste, and is too apt to apply them, without always considering their fitness. Moreover, many of our country residences are occupied by those who have long dwelt in cities, and having grown up with city notions, can not avoid taking their predilections with them—as we constantly see they have done—nor do they allow us to remain in ignorance of the source

from whence they have drawn their ideas of taste.

With regard to colors, as with every thing else, it is true that the *fashions* change and *tastes* vary, but the *principles of taste* constitute a “fixed quantity”; they are the same everywhere, in town or in country, in modern as in ancient times: by them we must be guided, if we desire to succeed in producing a happy effect in any department of art; if we do not follow their guidance, we may be almost certain to produce a failure in the results, instead of a happy issue for our labors.

One of the first elements of good taste, is the *adaptation* of the material employed to the end at which we aim, whether in landscape gardening, architecture, or any other art. For instance, nothing could be more ridiculous than a gothic or rustic cottage made of red bricks or with boards painted white, unless, indeed, it were a mansion made to resemble a Grecian temple, but, instead of being constructed with solid white marble, it were built of flimsy and perishable wood, and painted with a flaunting color, or, indeed, the strange anomaly occasionally witnessed, of a long, narrow *town house*, with back buildings, erected on a beautiful site in the country.

Where our choice of material is limited we must necessarily be constrained to select such as come within our reach—and here, the bricks have not only a rough surface, but they require a coat of paint to preserve them from the effects of the weather.

Every one who came from an eastern portion of our country, about twenty years ago, must have been struck with the aspect of Cincinnati. Accustomed to the antique appearance of the old stone houses or the ancient edifices made of hard burnt bricks, the red relieved by figures built in with black, in fantastic attempt at ornament: every person bringing such associations of a city, must have been charmed with the bright aspect of our city as she then was, resting upon the bank of a noble river, rapidly extending her limits, already claiming the regal title of "*Queen of the West*;" the houses two stories in height, standing back within their wide inclosures, and surrounded with green grass and charming shrubbery, and painted with some light, fancy color. Even at that period, brick was used to a great extent as the building material, interspersed with a few stone houses and many of wood. But the prevailing taste induced the application of the lighter hues in the painting so necessary to either wood or brick, and this, in connection with the bright green of the grass plats, enlivened the aspect of the young city to a degree that can not be realized by those who have only beheld it in modern times, since the introduction of coal has hung its funereal pall over us, blackening every thing it touches.

The necessity for painting our bricks continues, and we now not only paint for preservation, but for appearance. The question arises, what color will best overcome or withstand the gloomy effects of the coal smoke? One after one, the pleasant old stone tints were banished, until the power of fashion carried all opposition before it, and enveloped

every thing in its folds, covering every brick with an envelop of odious venetian red, set off, it is true, with a white line, marking out the courses to resemble an unpainted brick wall, but too palpable a deception to mislead any one—it was still nothing but *painted brick*. The feeble voices of the opposition were drowned in the general huzzas for the new color, which was said to be so bright, so cheerful, so pretty, and, *oh mendax! so natural*. At one time the admiration for painted red bricks was so universal that it was only here and there an old fashioned stone colored wall could be seen in our city; and upon a certain occasion, when some independent thinkers on a prominent street, who had tried the red color, chose to direct their painters to come back to the sober tints, a vote of thanks was offered at the Horticultural Society as a compliment to them. The argument of economy, which has been so frequently urged in favor of the red walls, has no foundation in truth, for observation has clearly proved that it will not resist the influence of the coal smoke so well as almost any tint of sober stone color. In the mean time more and more of the Waverly sand stone was used in building, and in several public edifices, as well as in some private dwellings the fine solid grey lime stone of Dayton. Our citizens, also, in their Eastern tours, had seen the fine effect produced by using the "old red sand stone" in large buildings, and now came a revulsion, to a certain extent; many of the dull and bright red brick walls were by the magic hands of the painters at once transformed into solid sand stone. About this time, too, the mineral paint of Ohio was discovered, which furnished a tint sombre enough to suit the most serious tastes; moreover, it was cheap and "fire-proof," and was freely adopted, so that our once cheerful city was plunged from the fiery hue of bloody red, deep into the ashy tints, as though in testimony

of a hearty repentance for the errors of its ways.

The venetian blinds which are so constantly attached to the windows of our houses, were almost universally painted green, a charming color when in its proper place—that is, in the lawn or the forest—but one which it is almost impossible to imitate in paint, especially when exposed to the weather. Different tints of chrome green may look very well when first applied, but they soon change to a dull, dingy, blackish hue, or to a dirty yellowish green—and the French or arsenic green, though a delicate color in the druggist's jar, one of the very prettiest that can be exhibited, is a meager affair when applied to the surface, and one which is very soon ruined by exposure to the air and dust. Those who have outside venetian blinds are therefore advised to use a tint somewhat darker or lighter than their walls, but of the same quiet stone color, and they will soon find that these hues will wear much better than any green that is commonly applied.

To return, then, to the position assumed, that *adaptation* makes every thing tasteful,

it is urged upon all to reflect upon the results of long continued observation—and even in so simple an affair as painting a town house, to endeavor to secure that shade which will be most agreeable, most cheerful, and especially most useful, and least likely to be affected injuriously or unpleasantly by the circumstances to which it must be exposed.

Again, all are requested to consider, not only the immediate result, but the effect upon the *morals* of the community. The appeal is made to painters as well as proprietors, and especially to tenants. As we are compelled to live in an atmosphere of smoke and dust, let us at least endeavor to make the best of a bad bargain. It has been demonstrated by actual experiment, that red and green outside, and that white, inside or out, are more obnoxious to the injurious effects of dust and coal smoke, than any other colors—why, then, should the principles of good taste continue to be violated, and the want of adaptation be still overlooked? since the object of painting, with us, at least, is not merely preservation of the material, but hiding of the dirt, so prevalent and so unavoidable.

DOWNING'S NEW WORK.

“THE ARCHITECTURE OF COUNTRY HOUSES—including Designs for Cottages, Farm Houses and Villas, with remarks on interiors, furniture, and the best modes of warming and ventilating. With three hundred and twenty illustrations.”

THIS book, so long looked for, and so provocingly delayed, is now before the public. To say that we are delighted with it, does not fully express our feeling;—we *love* it. That another of Downing's offerings to rural art should be marked by strong sense, elegant style, and complete adaptation to the wants of those for whom it is designed, is only what we anticipated; but that it should satisfy expectations continually augmenting by the continual delays in its publication, shows us

how a full and unwavering *faith* may be completely rewarded even in this world. Our surprise in perusing the new book is, not that it excels in beauty those works of the author that have preceded it—for this is not the case—nor that it displays any thing very novel in its designs, mechanical execution, or composition—in all of which, like its predecessors, it is simply elegant; but it is surprising that subjects upon which the author must have dulled the nibs of an hundred pens, could again be presented to us so freshly, so analytically, so practically, and with such grace.

Section one, treating of the real meaning.

of architecture—its various uses—its different kinds of beauty—the peculiar significance of each—*expression of personal character and occupation* in Architecture, etc., contains the essence of the book, and should be read once a year in every country and village Lyceum.

It might startle the self-satisfied inmate of some new white "rectangular," to hear that in the progress of building, from the wigwam and tent of the Indian, and the strong and warm, though rude house of the Croats—occupied in common with their animals—the author quietly alludes to his simply utilitarian box as but the next example above the latter. We quote the paragraphs:

"Our third example may be found in any portion of the United States. It is nothing less common than a plain, rectangular house, built of timber from the forest saw mill, with a roof to cover it, windows to light it, and doors to enter it. The heat is kept out by shutters, and the cold by fires burnt in chimnies. It is well and strongly built; it affords perfect protection to the physical nature of man; and it serves, as far as a house can serve, all the most imperative wants of the body. It is a warm, comfortable, convenient dwelling. * * * * *

"In the savage, the half civilized, and the civilized states, the idea of the useful and the ornamental differ, but only in degree. It is still what will best serve the body—what will best shelter, lodge, feed and warm us, which demands the whole attention of the mere builder of houses. It would be as false to call only this Architecture, as to call the gamut music, or to consider rhymes poetry, and yet it is the skeleton or framework on which Architecture grows and wakens into life; without which, indeed, it can no more rise to the dignity of a fine art, than perfect language can exist without sounds."

It appears strange that people who all their lives, have had before them examples of dwellings such as they admire—dwellings that express, by their unassuming air of comfort, the very qualities they most appreciate in character—will entirely overlook the hint

thus furnished them, and in erecting their own residences, unhesitatingly adopt a fashion that probably has features expressive of qualities they most dislike. We think that though Mr. Downing is right in affirming that a country house should generally express the better side of the life and character of the builder or occupant, he errs in maintaining that it generally *does* so. Ignorant of the acknowledged principles of propriety so gracefully enforced in this book, countrymen, villagers and citizens have trustingly followed the dictates of architectural fashion, upon which the changes are rung by the "boss workmen," to whose skill the proprietor yields becoming deference, as to oracles of architectural art.

It does not occur to them that the admirable specimen of architecture which somewhere gave rise to the fashion, would, after numberless repetitions and minor modifications from successive builders, inevitably become a burlesque, and not a duplicate, of the original. Paintings of Cole's "Youth on the Voyage of Life," copied ad infinitum by village painters from common engravings, would bear about as much resemblance to the great original, as most houses of "the fashion" do to the model that gave rise to it. That persons who have devoted little or no time to acquiring a knowledge of and cultivating a taste in architecture, should defer entirely to those who *ought* to know more than themselves, is very natural; and they consequently pay for and occupy houses that do *not* express the fairest side of their characters. A carpenter or joiner of known skill is consulted as to the proper proportions, style and finish of a house, but the inquirer does not usually carry his consistency so far as to consult the molder of brick as to what constitutes an appropriate form or tasteful symmetry in a brick house or chimneys. Yet it is as proper in one case as in the other. It would not be more absurd to assert, that the laborious fireman of a

steamer, or the skillful welder of engine bolt-heads, was capable of assuming the place of the engineer, than to suppose that the accomplished artizan in wood or stone was consequently possessed of general knowledge or cultivated taste in architecture. The arts of designing and of executing are very distinct; and though they may require equal natural ability, a much more thorough mental training and cultivation of the taste are necessary to attain to excellence in the former than in the latter.

The greatest drawback, however, to the dissemination of just ideas of what is appropriate in dwelling house architecture, is the general supposition that what is very costly and highly finished, is consequently of a high order of beauty and excellence. The natural result is a general and indiscriminate imitation of the houses of the rich, usually producing the most ungainly aspirations to architectural distinction. If the original have been designed by persons not conversant with the art, its highly finished parts will show incongruous proportions and unmeaning features. In less expensive imitations, these features stand out more glaringly, because not relieved by the high finish which is always gratifying to the eye. If, however, an expensive mansion has been designed by a competent architect, its proportions and features, when reduced to one-half or one-fourth the expense, would, by their ambitious pretensions and want of truthful adaptation to the means, be a striking illustration of the one step from the sublime to the ridiculous. It does not appear to be a generally recognized fact, that a house may be highly finished and not tasteful, and quite tasteful without being highly finished—may abound in beautiful features, and yet be quite unsatisfactory to a cultivated taste, or that it may have no one feature that particularly pleases the eye, and yet the expression of the whole be delightful.

Under the head of "Truthfulness of Materials," the author makes a suggestion that is, to us, new and pleasing, viz: that brick houses, when stuccoed, should not be marked off in courses to represent stone, because that is an untruthful trick, but that they should be faintly pressed to *represent the courses of the bricks beneath*. When passing stuccoed buildings of moderate size, on which courses of stone large as the blocks in the Astor House were projected with astonishing boldness, we have frequently wondered that the owners should fail to see the superior beauty, aside from its simple truthfulness, of the plain surface of the stucco. This is more remarkable when we recollect that an imitation of stone involves the necessity of coloring to imitate some real specimen of that material, and adopting some tint less pleasing, in common dwellings, than many which might have been chosen. The suggestion of Mr. Downing is a happy one, and not liable to this objection, and will make stucco at once more beautiful and more truthful.

The truth of the author's remarks in regard to the greater difficulty of designing a satisfactory cottage, than a satisfactory villa, has been experienced by every one who has had much to do with this kind of planning, and the examples are very rare, where those who are about to build cottages, do not expect to get far more accommodation than is possible, for the amount to be expended.

* * * "In designing the cottage, the architect is bound down by rigid notions of economy, and must bring all the accommodation within very narrow limits; in the villa, the cost is not so carefully considered, and space enough is afforded to allow elegance and variety of form and arrangement."

To give the reader a true idea of the nature of the cottage designs in Part I, of this volume, and of the abounding common sense of the author, we quote further:

"It does not follow, however, that tasteful

cottages cannot be designed. There are no buildings, however simple, to which either good forms or something of an agreeable expression may not be given. As a cottage may have all the beauty which results from proportion and symmetry, without adding a farthing to its cost, and without detracting in the least from its simplicity and truthfulness, it is evident that these two elements should be considered before any ornaments are introduced. Not only should the general outlines be well proportioned and symmetrical, but also the forms of the smaller portions—such as doors, windows, chimneys, etc. * *

"When the means of the builder enable him to go beyond these simple beauties of form, his first thought on elevating the expression of the cottage, should be to add ornament to the most important parts of the dwelling. These are the entrance door, the principal windows, the gables and the chimneys. The front door and the principal or first floor windows should be recognized as something more than mere openings, by lintels, hoods or borders; the gables, by being very simply molded or bracketed about the junction with the roof; the chimneys, by a pleasing form, or simple ornaments, or merely by having the usually clumsy mass lightened and separated into parts. After this, the next step is to add something to the expression of domestic enjoyment in cottage life—such as a simple porch, or veranda, or simple bay-window. A much higher character is conferred on a simple cottage by a *veranda* than by a highly ornamental gable, because one indicates the constant means of enjoyment for the inmates—something in their daily life beside ministering to their necessities—while a mere ornamental verge-board shows something, the beauty of which is not so directly connected with the life of the owner of the cottage, and which is therefore less expressive as well as less useful.

"In designing the following cottages, we have aimed rather at producing beauty by means of form and proportion, than by ornament; hence, it is not unlikely that those who only have a smattering of taste, and think a cottage cannot possess any beauty unless bedizzened with ornaments, will be disappointed with the simplicity of most of these plans. But we trust, on the other hand, that persons of more information, and more correct taste, and especially those who have followed us in

our development of the true sources of interest in rural architecture, will agree with us that tasteful simplicity, not fanciful complexity, is the true character for cottages."

Having thus opened the book to the reader, we shall glance at the several Designs of Part I,—wishing to have it distinctly understood, if we find any reasonable fault with them, that it is by the aid of close scrutiny. If we thus detect, in what our author writes or designs, any violations of exquisite propriety, we claim the privilege of being hailed by lovers of architectural literature, as a veritable discoverer.

DESIGN I—"A small Cottage for a Working Man," is a dwelling nineteen feet by thirty, with a good hall, bed room, living room, porch and pantry. The architectural characteristics of the exterior are—vertical, battened siding, wide projecting roof, (supported at the side by simply extending the rafters two feet over the plate, and at the gables by pieces fastened across the two end rafters, and continued over,) and hoods, or sloping shelves on brackets, over the windows and doors. Altogether, the design is quite satisfactory for a dwelling to be erected at an estimate of \$400. The perspective, however, does not do justice to the intention of the designer, as the windows are represented so disproportionately large as to give the house too much of an out of doors look. There being no porch over the front door, the cottage would most properly front east, that the owner—"his toil and labor being done"—may sit in the shade, on his front platform, look where the sun looks, smile on what he smiles upon, and as summer twilight hours steal on, watch the animated face of nature slowly sadden at the departure of its lord. Should the house front west or south, a porch over the front door would be indispensable.

DESIGN II—"A small Bracketed Cottage."

The architectural features are the same as in the foregoing, except that a bay window is introduced, and the other windows are divided into two parts, with *lattice* lights. With its arches and bowers of vines, it is a rural gem that would grace Edensor, or have honored Eden. This cottage is pictured on the swelling brow of a broad stream. Now we respectfully submit, that *such* a dwelling nestling among trees and guarding sweet vines, is all that most persons could imagine of cottage charms, and it is therefore unkind to tantalize with this water prospect, those who would otherwise deem themselves entirely blessed by such a home, with no water in view. It is a mournful fact, Mr. Downing, that your noble Hudson *can not* be seen from all the cottages in the Union. The estimate for this plan, at Newburgh, is \$512.

DESIGN III—"A Symmetrical Bracketed Cottage." Heartily do we agree with you, Mr. Downing, in considering this a successful example—"a model cottage"—needing no adjuncts of foliage to convince us of its ruralness, as well as artistic beauty. It is not to be inferred from the term *bracketed*, here used, that this cottage has fancifully cut, ornamental brackets; for, with the exception of massive curved brackets supporting the large, projecting dormer window over the front door, they are but plain joist stuff, requiring neither circular saw nor drawing knife in their construction. The design is, of course, more meritorious, that so happy an effect is produced by means so simple. Estimate—of wood on the Hudson—\$975.

DESIGN IV—"A small Cottage of Brick and Stucco in the Gothic Style." This is charming in every feature but one, and that, to our eye, gives it (we quote you, Mr. Downing,) a "bare and bald" expression. We refer to the roof, which, instead of projecting, is cut off by the gable walls that rise above and are finished by a heavy coping. How-

ever beautiful this style appears in large villas, we cannot imagine any situation where it is either appropriate or agreeable for a cottage of the size of the one in question. Estimate of cost, about \$1000.

DESIGN V—"Working Man's Model Cottage"—is a plain, broad eaved house, that needs nothing but vines to render it charming. Dimensions, twenty-five by thirty-eight feet. Cost, about \$600.

SECOND DESIGN V.—This is the most judiciously picturesque small cottage in the rural gothic style, that we remember to have seen. It suggests a comparison with "Hope Cottage," near Albany, (figured in the Albany Cultivator of January, 1848,) a dwelling nearly the same size, in the Italian style, and equally picturesque. The two form an admirable pair, for comparing the relative advantages and beauty of the respective styles, for small picturesque dwellings. Estimate for this design, \$1100 to \$1360.

DESIGN VI—"A Symmetrical Cottage." This lovely cottage is a modification, or rather simplification, of the rural gothic style—at least so says the author—but we think the variation from the old forms of rural gothic is so entire and judicious, that we venture to give to it, as well as designs one, two and three, the more distinctive and appropriate title of the *Downing* style. Their appearance constitutes an era in *American Architecture*.

It is difficult to decide whether this design or number three is the more beautiful, and though the latter is finally our choice, architecturally, design six is the prettiest picture in the work, and the best illustration of the outside *setting* for a cottage. A charming feature of this design, and one scarcely known in our country, is its little gable roof over each of the lower windows. The verge board on the front gable we do not fancy. Estimate, for wood, \$835.

DESIGN VII—"A Suburban Cottage in the Italian Style." This is a specimen of a very plain form of Italian architecture, which, on some accounts, we think is more beautiful than any other style, for *suburban* dwellings. Estimate, of brick and stucco, \$2000.

DESIGN VIII—"A Regular Bracketed Cottage." The form of this house is more common than any other in this country—a parallelogram—twenty-five feet by thirty-six. The design takes its character from a wide projection of the roof on a few broad curved brackets, and it is additionally ruralized by a wide trellis veranda, which extends all around it, and is formed by posts supporting trellis bars parallel to the house, and ascending toward it like a veranda roof. Vines twining up the posts, form a verdant covering. We consider this, in its exterior, an unequivocal *country* house; but the ground plan—a basement kitchen being provided for—is as unmitigatedly *townish*. We ask, Mr. Downing, in order that you may brush the mist from our eyes, does not this contradiction in the outer and inner plans, argue untruthfulness in one or the other? And when, for such good reasons as you have given, it is sometimes necessary, in a small country house, that the kitchen should be in the basement, ought not the exterior to express that it is a country house *with town principles*? Estimate for this cottage, (of wood,) \$1278.

DESIGN IX.—The exterior represents a simple and unexceptionable form for a country house, and, with some back entrance to the living room beside that through the cook room, it would have an equally judicious interior. The cut representing the finish of the veranda ceiling, reminds us that it is very difficult to convince persons whose tastes have been fixed by common example, that there can be any beauty in a veranda in which the rafters or any portion of the frame are exposed to view; and even where it is suggested

to persons desiring dwellings of the cheapest kind, the proposition is often met by the exclamation—"that's too barn-like to suit *my* taste"!

DESIGN X—"A Swiss Cottage." This is as well adapted to our country as any cottage in the Swiss style that we have seen.

The interior arrangement is admirably compact, and the exterior is very picturesque without any apparent sacrifice of utility or wasteful expenditure for mere effect. We agree with Mr. Downing in considering the features of the Swiss style, as modified to suit the wants of our country, eminently expressive of domestic, and still more of *social* life; but we deny that the Swiss style, in so much of its purity as is illustrated by the design before us, is better adapted to cold than to warm countries—to snowy mountains, than to our sunny rolling prairies; indeed, we think Mr. Downing, in reading the *expression of the features* of the modern Swiss style, has been blinded by the poetry of old associations, else he would not have said—"the true site for a Swiss cottage is in a bold and mountainous country, or in a wild and picturesque valley, * * * while the same cottage, built in a level country, would only appear affected and ridiculous." Its most characteristic form and features have much less adaptedness to human wants in cold mountain regions, than those of the rural gothic; and it really appears to us that associations, much more than its actual features lead architects to assign the style only to cold, picturesque localities. Its roof is not remarkable for steepness—its far extended eaves on brackets are as useful in sheltering the walls from our sun and driving rains, as in bearing a load of snow on a steep hillside. Its continuous balconies are certainly as useful in a climate where, in the sultry season, each passing breath of outer air is wooed, and summer evenings invite to free breathing

under the great dome, as where the sun shyly glances upon green terraces and valleys among the glaciers. We should not consider its features otherwise than truthfully significant on a simple woodland or prairie swell. If its bold features, abruptly breaking the light and shade, are unharmoniously picturesque in smooth scenery, why is not the lordly old oak equally so in the same situation? Are its rough arms, its broad contrasts of deep shadow and reflective green, and its massive outline, only appropriate where bold hills repeat on every side the leading characteristics of its form? No; it graces equally hill, valley and plain, and though jagged on the mountain, mossy on the moor, and luxuriantly massive on the fertile plain, it is always in keeping, always at home, and yet ever unmistakably an oak. There are forms, both in nature and in art, that can bear to be repeated in varied and even diversified situations and circumstances; and among these we place the oak and some styles of architecture. And though a picturesque Gothic cottage like second design V, could not with propriety be placed on a smooth flat plain, in a hot climate, and surrounded by only round-headed deciduous trees; or a highly artistic Italian cottage on a hillside among rocks and wild firs; yet the Swiss and other bracketed styles may with propriety (associations aside) be adapted to both.

This idea of harmony between minor forms of architecture and surrounding nature, is often carried to an absurd length. A dwelling, the features of which, though striking, are measured by inches, need not aspire to harmony with the league measured features of vast mountains. Heaven's vaulted dome extends its even span over rocky range and smiling plain alike, and every form of architecture; yet we need not shape or color our roofs to harmonise with it, nor censure the Great Architect for want of harmony

between his uneven floor and his smooth ceiling.

The idea of fitness derived solely from old associations, is one which has and should have but little weight with most persons in this country. What is *intrinsically* useful, truthful or beautiful, and not what has been made to appear the one or the other, by old customs founded on circumstances with which few are familiar, should be all that most persons care to know. It is our duty, on the highest platform of social life upon which men have ever existed, to *make* around our homes, and for our country, new, peculiar and nobler associations than the world has yet known; and we do wrong in clinging to the past, when we have climbed to the threshold of a future, high above any preceding age, in all the arts that bless man and adorn the earth.

But we are rambling too much at large, and will close our comments on this Swiss design by remarking, that it appears to us, that from a mingling of the Swiss and Italian styles might be formed an *American* style, less picturesque than the former, less polished than the latter, with capability for appropriate adaptation to the varied localities of our sunny country.

DESIGN XI—"A Square Suburban Cottage"—a neat, compact house, twenty-eight feet by thirty-two, built of wood in a style called Tuscan, and estimated to cost \$500.

DESIGN XII—is in the same style, of brick and stucco, larger than the foregoing, with an arbor veranda on three sides, and estimated to cost \$1300. This is the last cottage design of Part I—the remaining portion is devoted to Farm Houses, a review of which, as well as of Part II, containing designs for villas and furniture, may appear in a future number of the Horticultural Review.

When Part I, containing the Cottage and Farm House designs, shall be issued sepa-

rately, we hope that it will be at once introduced into every school library in the Union, and be made prominent on the premium list of every agricultural and horticultural society. When this comes to pass, the awakened taste

of a million cottagers and countrymen will widen the circulation of our REVIEW till it secures a profitable return for the seed that a generous love of rural art is now hopefully sowing. F. J. S.

FRUIT MEMORANDA.

From the Albany Cultivator.

BY W. L. EATON.

Grafting old apple trees.—Some persons, I have noticed, in grafting old trees, put in as many scions at one time as they think the tree ought to have. The next year they trim off all the original branches and leave the bare limbs with one year's growth of the scions at the ends. This causes a rapid growth of the scions, rendering them liable to be broken off by the wind, and as they can not take up all the nourishment furnished by the roots, shoots start out all over the trees which from their number are very troublesome. A better way is shown in *Thomas's American Fruit Culturist*, which is, to begin at the top and graft a third of the tree a year till it is completed. This does not throw all the nourishment of the tree up to the scions at once; and they start better, from not being shaded by the foliage above them, when the top is grafted first. From the same source we learn, that "instead of cutting off large branches and grafting them at once, it is better to prune the top in part which will cause an emission of vigorous shoots which may be grafted with ease and success." I have seen trees that had begun to decay, grafted on the old branches and the failure showed the folly of such work.

Pruning grape vines in summer.—It is thought necessary by some, to cut off the ends of the shoots of grape vines in summer, in order to facilitate the growth of the grapes, or that the sun's rays may fall directly upon them. The following from the *Fruit Culturist* will set this matter right. "The summer treatment of grapes consists chiefly in thinning the shoots where there is danger of the leaves becoming crowded; thinning out the bunches; and, on exotic sorts, thinning out the berries freely. The frequent practice of nipping off the ends of the shoots just

above the bunches, when the grapes are as large as a pea, lessens their subsequent growth. For all fruits grow and ripen best when fed from a good supply of well grown but not crowded leaves, hence the foliage should not be lessened, nor the shoots shortened, until they interfere with each other's development."

From the Genesee Farmer.

THERE can be no such thing as a complete, satisfactory success, in the cultivation of the orchard or the garden, with a poor, shallow, ill prepared soil; and very few people who are not familiar with gardening or who have had no opportunity of seeing good garden management have a correct idea of what good garden culture is or ought to be. About this time of the year, in passing around the country, we find in the neighborhood of most farm houses a small plot of ground usually called the garden; but of all other places on the premises it looks decidedly the least like one; during the last three months grass and weeds have been allowed to grow unrestrained until they have completely covered every thing and are actually rearing their heads above the garden fence. It seems to be the settled opinion that such labor as hoeing and weeding, though well enough and perhaps necessary for the first three months of the season, while the crops are working their way through the ground, are quite superfluous in the autumn months. Some of the crops have been gathered, the others are nearly full grown; and what good could hoeing or weeding do? These weeds remain, therefore, and all dry stems, rubbish, etc., that have accumulated in the garden during the season, are left in heaps, so that the field mice are attracted there to occupy themselves during winter, gnawing the bark of the trees, if there be any. Next spring—say in the latter of April, when the

weather has become warm and pleasant, and birds are singing and trees preparing to expand their blossoms, the temptation to do a little gardening can no longer be resisted—something *must* be done; and what is it? Why, if manure be quite handy, a sprinkling is thrown over the surface, and the plow is introduced, a part of the ground scored up until it has a fresh surface; perhaps half the trees in the garden have been bruised or broken with the whiffle trees, or the tops eaten off by the horses; but it could not be helped. This is, as near as we can describe it, the routine of gardening practiced among a very large portion of our agriculturists, even in some of the oldest and wealthiest districts. We never ride a dozen miles in the country, in any direction, without coming upon many such gardens, the property of wealthy farmers, with large, well-tilled, and profitable farms *paid for*, and money, more or less, let out on interest besides. The poor farmer who is struggling under a heavy debt, with small stock and small means every way, is excusable, if anybody be, for owning a garden of weeds; but for those who are in easy and even affluent circumstances there is no excuse whatever, and we always feel inclined in passing their premises to stop and lecture them a little on the subject; but as that would not do, we take this means of bringing it to the attention of some of them at least.

We ask these farmers to take a look into some of the little gardens in the nearest village, and see what is going on there. At this season the ground will be as clean of weeds as in July; the crops will all be gathered; all the bean poles, pea sticks, etc., will be carefully put away; dry stems of plants, heaps of weeds and rubbish will be snugly deposited where they ought to be, in the manure compost heap, and preparations for another season, such as manuring and trenching, will be already in progress. A garden will be there next season worthy of looking at, and fruits and vegetables will be grown in it that will be the talk and wonder of the neighborhood.

We have spoken of trenching, and it might, be well enough at this time and in this connection to give a brief description of what we mean by trenching. In the first place, the object of trenching is to *deepen the soil*, to enable the roots of plants to penetrate it, and to increase its capacity for retaining and furnishing the necessary food of plants that grow

on it. A shallow soil, however rich it may be made with manure, is unfit for gardening. The roots of plants in it are kept near the surface, and always suffer in a time of drouth. In dry, midsummer weather, the crops on a thin-untrenched soil will be completely scorched; their stems will droop, turn brown, and, if the drouth should continue a month or six weeks, as is frequently the case, they die or become a total loss; while in a deep trenched garden, where the roots can penetrate freely in search of food and moisture, the drouth is scarcely felt at all. Tap-rooted plants, such as beets, carrots, parsnips, etc., can only be grown smooth and fine for the table on a deep soil. The highest culture that can be given on a thin, hard soil will only produce knotty, forked, deformed things, neither fit to be seen nor eaten. There can be no good gardening without a good, mellow soil, fit for the roots of plants to enter to the depth of full eighteen inches—two feet would be still better. Very few people are fortunate enough to have a garden soil naturally fit for roots to this depth; hence the necessity for trenching.

The proper implement for trenching with, is one which some how or other seems to be very unpopular, but one quite indispensable in the garden—the spade. A plot of ground is trenched by commencing on one side and opening a trench two feet wide, and as deep as you wish to make your soil—say two depths of a common spade. The earth taken out of this first trench or opening is carried on a cart or wheelbarrow to the rear of the plot where the trenching is to terminate. The first trench being opened, another space of two feet is marked off, and the surface spadeful of this thrown into the bottom of the trench. If manure be needed, a layer of manure is thrown on, and then the bottom spadeful is thrown on the top of that. Where this second course is hard, bad soil, it should only be loosened up with the spade or pick-axe if necessary. To throw such earth on the surface would be ruinous to the ground for a year or two until it would be mellowed and enriched by amalgamation with the other soil and manure.

Where a garden is new, or even large, the subsoil plow might be used, and will no doubt be much cheaper than the spade; but where a garden is small or encumbered with trees, the spade is the thing. If taken at the proper season, an ordinary sized garden may be trenched at very trifling expense. It may be

done when nearly all other out door work upon hand has ceased. We have kept trenching going on all winter, by covering the ground with leaves a few inches deep. There is no farmer but could find, if disposed, time enough with his men to prepare his garden in this way and then when spring comes the labor of preparing and seeding would be comparatively light—it could be done much earlier in the season, and the crops would be of some value and creditable beside.

The manure used in gardens should be old and well decayed, so that it can be cut easily with a spade. You may then depend upon its not filling the gardens with weeds, as fresh manures always do. The trenching has a wonderful influence on the soil. We know little about it in this country. In Europe it is as common in garden, orchard and vineyard culture as plowing is here for grain crops. In the wine making districts of France and Germany, the soil has been made out of hard, gravelly, slaty hills, that in the natural state would appear about as fertile as the rocky banks of the Hudson. The beautiful and famous vineyards of Cincinnati occupy barren looking bluffs around the city, that have been trenched by Germans in their own style and brought into their present productive and polished state.

It is not dry, hard, thin soils alone that are benefitted by trenching, but heavy, cold and damp soils; loosening of the subsoil renders them porous, allows superfluous water to pass off, and warms and sweetens the ground. We recommend this subject to the immediate attention of all who have gardens; and, if any further information be desired on the subject we will cheerfully impart it if we can. We are so fully convinced that this thorough preparation of ground is at the bottom of all good and successful gardening, and so fully aware, too, of the extent to which it is neglected, that we cannot press it too strongly.

Thinning Fruit.

The New England Farmer gives the following:—"One peach grower informed us that he had taken off two-thirds of his peaches and as they increased in size, and appeared too thick on the trees, he said he was sorry that he had not taken off one half the other third. One man complained to his neighbor, that a certain variety of the peach which his friend had advised him to cultivate, was a

poor bearer. 'Stop your complaint,' was the reply, 'until you sell your fruit.' He raised on one tree three dozen of peaches, sold them at two dollars per dozen, and was satisfied."

This, it is true, was an extreme case, but the evils of overbearing, contrasted with the benefits of thinning, can only be understood by actual trial. The cultivator may be aware that, by reducing the number, one hundred specimens may fill his basket, where two hundred were required from an overloaded tree, but until he actually tastes and compares the two products he cannot appreciate the incomparably superior quality of the former.

Many are deterred from thinning their fruit by the slow and tedious nature of the operation; but a very expeditious way more particularly applicable to the peach, is to *shorten in the shoots*,—cutting off one half or two-thirds of all one season's growth. Where trees have been neglected for several years, and are beginning to extend their branches into long bare arms, the shortening back should extend to larger portions of the branch, until the tree is brought into a more compact shape. We have on former occasions more particularly pointed out the nature of this mode of treatment, but we wish now to urge the necessity of its timely performance. The earlier in winter it is attended to the less will be the liability of its omission. We have found it to succeed quite as well even if performed by mid-autumn as when left till spring.

From the Genesee Farmer.

The Northern Spy Apple.

A few days ago we were invited to ride out to Mr. Hand's, of Mendon, in this county, to see his Northern Spy apple trees before the crops were gathered, and we can safely say that we have never been more gratified with anything in the way of bearing fruit trees. A great deal has been said about the peculiar tendency of this variety to produce a large number of small, inferior, or unmarketable fruit; and we only wish that those who entertain such an opinion of it, could have been with us and seen Mr. Hand's trees. A more abundant, uniform, and perfect crop we have not seen, of any variety. Twenty-four trees we believe, in one row, some sixteen years old, with straight trunks, sixteen feet high, and perhaps a foot in diameter, with lofty, symmetrical heads loaded in every part, the boughs bending almost to the ground,

with large and beautiful crimson fruit, is surely a pleasing sight. Of small, unmarketable fruit we could see none. Mr. Hand has probably one hundred and fifty barrels, and has sold most of them at \$2 50 per barrel, while other varieties sell at \$1 25 to \$1 50.

It has been said that the Northern Spy requires free pruning and high culture; and there is no doubt that it will be much better with such treatment, than if neglected. So will all other varieties and especially those that mature so late in the season.—We notice that Mr. Hand's trees are in excellent condition. He has pruned out the center, so that it is quite open, thus giving the sunlight free access to all parts of the trees; but the trees stand too close—the lower branches of the adjoining trees are already meeting and coming in contact with each other, so that the fruit on them is considerably shaded, and consequently less highly colored than those on the top branches, and they will not be so finely flavored. Mr. Hand pointed out a tree that stood in open space, and on this every specimen was highly colored. It is false economy to plant apple trees too closely. We allude to this fruit now, for the benefit of distant cultivators who remain in doubt as to its value as an orchard variety.

PRUNING THE GOOSEBERRY.

To commence with the cuttings, we would observe that these should be as strong as possible, and twelve or fourteen inches long. Previously to planting, all the buds should be pruned clean away, with the exception of the topmost four. The cuttings may be put in any time from November to the beginning of February, choosing a shady border for them. They should be in rows a foot apart, the cuttings about six inches apart. Nurserymen plant thicker; the cottager, however, will do well to have a little more room, for thereby his young plants will be stouter. By the next autumn there will be at least two good shoots on each cutting; two good ones will be enough, and these must be pruned down to about four eyes or buds on each shoot. Unless particularly wanted to plant in their final stations, they should, by all means, remain another season in the cutting-beds, they will then be strong bushes, and deserving a permanent place. Let their stations, then,

be prepared by the middle of October, if possible, and let them be pruned shortly before they are removed. In this pruning, the first point is to select five or six of the shoots best-placed as to form, setting them out like a punch-bowl. All that interfere with this form may be cut away, and the remaining shoots shortened, this season, about half their length. In another year, with a little attention in the way of watering, if necessary, in May or June, and a freedom from the depredation of insects, they will be fine bushes, and will have produced a few nice fruit. Now then comes the profit. They will now be full of fine shoots, some drooping outward, and many crossing each other in all directions. In November they may receive their pruning, which will consist in removing all the worst cross-shoots, and in keeping the middle of the bush still somewhat open. Dangling shoots may have as much of their top pruned away as will prevent their touching the ground, and even upright shoots may have as much cut off as appears of a weakly character. The pruning of the following seasons will be much of the same character, still keeping the middle of the bush much more open than the outside. As a general rule, for the distance at which the bearing shoots may be left, we shall merely observe, that in a well pruned bush no two shoots will by any means touch, but stand apart quite distinct. Badly pruned bushes are both less productive and much more difficult to gather the fruit from than those which are done in a workmanlike manner. As the bushes get older, and show signs of wearing out, the knife must be used more liberally; indeed whole limbs of old wood will occasionally require to be removed, in order to throw the powers of the bush into a closer compass.

R. ERRINGTON.

The Dix Pear.

THIS is undoubtedly one of the finest of American pears, combining large size, beauty of form and color, with excellent quality.—The tree is hardy, erect and thrifty, and bears abundantly. Mr. Walker, now president of the Massachusetts Horticultural Society, once said, in noticing it in Hovey's Magazine, that the time would come when it would be as popular and as well known as the Bartlett; and we are inclined to believe that he was nearly right. All agree in saying that it is

long in coming into bearing. This is somewhat of a drawback; for few people have patience to wait ten or twelve years for a tree to bear. This peculiarity is still more objectionable, as it does not succeed on the quince. But we find that it succeeds when double worked on it. In 1848, we grafted it on a Jargonelle on quince, and this year it produced a fine crop of large, handsome and fine flavored fruit. So here is a way to fruit the Dix in a very short time. Get a good tree of some sort that grows freely on the quince, such as Duchesse d'Angouleme, Beurre Diel, Jargonelle, etc., and graft the Dix into it, and you will have it in two or three years at most, instead of ten or twelve—a great gain, surely.

Mr. Cole, in his fruit book, says it is "one of the most splendid and excellent of all pears, when perfect, selling at the enormous price of two dollars per dozen, and one tree produced \$47 worth at one crop; yet one of the most uncertain of all pears. In light soils it usually cracks and blasts, and often on strong, moist soils." Mr. Downing pronounces it "a fruit of the highest excellence." Mr. Thomas says it is "one of the most valuable of autumn pears. Mr. Hovey gives a colored drawing, and an account of it in his "Fruits of America," No. 9, recently published. He says:

"Few if any of our native pears hold a higher rank than the Dix. The large size, beautiful appearance, and exquisite flavor of its fruit, added to the vigor and hardiness of the tree, its productiveness, constant bearing and period of maturity, give it a combination of qualities which but few varieties possess. When originally brought into notice, in 1829, it was pronounced 'one of the very best autumn pears, which might, with the greatest safety, be introduced into our gardens;' and twenty years' experience has fully confirmed the correctness of that opinion. The Dix originated in Boston, in the garden of Madam Dix, in compliment to whom it was named about thirty-five years ago."

Genesee Farmer.

The Bezy De Montigny Pear.

SOME five or six years ago, we imported this variety from France, under the name Doyenné d'Ete, which is a smaller and earlier fruit. For five years we have had it bear regularly, and it has never been otherwise

than first rate. We think it strange that it has not acquired greater celebrity. In appearance it very much resembles the white Doyenné. It is equally buttery, melting and fine, with a muskiness of flavor like the Bartlett, which the Doyenné has not, and we consider this the principal point of difference between the two fruits. Noisette, in *Le Jardin Fruitier*, says they are so much alike that to distinguish one from the other it is necessary to have them together. He says: "The flesh of this is more melting, and of a quality incontestably superior to the Doyenné." In French nurseries it is grown variously under the names of Doyenné d'Eté, Doyenné Musque, Doyenné d'Oré, Comtesse de Lunay, etc. The tree is a vigorous and erect grower, both on pear and quince stock, equalling in this respect the Louise Bonne de Jersey, and it is productive to a fault. On the quince stock you can reckon a certain and abundant crop from the third or fourth year. We can recommend it as a pear of great excellence, and one that can hardly fail to give satisfaction.—*Genesee Farmer.*

From the Gardener's Chronicle.

Wintering Seed Potatoes.

WHEN at Mistley Hall in the autumn of 1830 or 1831, I stored away a few bushels of early round potatoes; they were laid on the wooden floor of a fruit room, about six inches thick. When they began to sprout, an idea struck me, that if they were potted, they would come in earlier than if the shoots were pulled off them. The foreman, therefore, got orders to pot them. Upward of 1000 small pots, called 60's, or 4 inch pots, were used for the purpose, putting a tuber into each pot. They were removed to a cold glass house, where they received no water. Sometime early in March they were turned out along the bottom of the south walls of a four acre garden. I had a large garden pot put down by the side of every plant, to cover them, should frost come on. The result was, a large and plentiful crop of very early potatoes, at a time when they were fetching a half a crown a pound at Covent Garden. I also gained prizes for early potatoes at the Ipswich show, for two or three years. Since the above period I have not allowed an eye to be picked off a seed potato, nor have I allowed a potato to grow in winter, keeping them

cool and dry. In 1847, I sent 1200 pounds to Covent-Garden market before the 19th of June; the money amounted to nearly £30 for the produce of nearly thirty rods of ground. A potato wintered on my plan is strong and healthy, compared with one that has been allowed to expend its substance in producing useless growths.

JOS. CUTHILL.

This plan would no doubt be found to answer a good purpose even in our own markets, where there are always enough purchasers who are able and willing to pay liberally for early vegetables,—our late spring frosts would be the chief difficulty.—Ed.

From the Michigan Farmer.

Advantages of having Abundance of Good Fruit.

Mr. Editor: Under this head I would observe, that no branch of husbandry can be made more profitable than the orchard, more especially when situated near a market, or near water communication; but even where these adjuncts are absent, it is still profitable on a smaller scale; and as it regards the pleasure, who, that have ever seen the tempting array of fine fruits at horticultural exhibitions, or elsewhere, have not felt how happy they would be to have them at their command; but in general they have thought it to be a thing unattainable, requiring far more ground and money than they had to spare, and have therefore given up the thought of obtaining them for themselves as being out of the question in their circumstances. If they had known how easily and cheaply they could have procured the best fruits for themselves, besides having probably as much surplus to dispose of as would pay ample interest on all their cost and trouble, leaving what they used as clear gain, they would have endeavored to plant trees for themselves, instead of depending upon a precarious supply of inferior fruits, from the market. And even in case of their having to sell their property afterward, would it not be far better and more easily disposed of with fine fruit trees, on it, than without?

In sections of the country where the more delicate kinds of fruits do not succeed, the cost of a succession of suitable fruits would be less, if larger quantities of the varieties that suited the climate, could be planted. In

from three to five years from the time of planting, the greater part of these fruits, would be in full bearing, and the owners would have a supply of fruit they never dreamed of, for a cost of not more than from ten to fifteen shillings a year, the price that a single barrel of apples would cost them.

PROFITS.

Those who have only planted the inferior kinds of fruits, and have given them no after culture, cannot estimate the profit to be obtained by planting the best kinds, and giving them judicious and high cultivation afterward.

Says Thomas' Fruit Culturist:

"Examples almost beyond number may be given, where single trees have yielded from five to ten dollars a year in fruit, and many instances where twenty or thirty dollars have been obtained. An acre of such would be equal to any of the preceding instances. If one tree of the Rhode Island Greening will afford forty bushels of fruit, at a quarter of a dollar per bushel, which has often occurred, forty such trees on an acre would yield a crop worth four hundred dollars. But taking but one quarter of this amount as a low average for all seasons, and with imperfect cultivation, one hundred dollars would still be equal to the interest on fifteen hundred per acre. Now, this estimate is based upon the price of good winter apples for the past thirty years, in our most productive districts; let a similar calculation be made, with fruits rarer and of a more delicious character. Apricots, and the finer varieties of the plum, are often sold for three to six dollars per bushel; the best early peaches, from one to three dollars; and pears, from hardy and productive trees, for an equal amount. Of the former kinds, two to five bushels per tree, with good management, is a frequent crop; and on large pear trees five times this quantity. An acquaintance received eight dollars for a crop grown on two fine young cherry trees, and twenty-four dollars from four young peach trees, of only six years' growth from the bud. In western New York, single trees of the Doyenné or Virgalieu pear, have often afforded a return of twenty dollars or more, after being sent hundreds of miles to market. An acre of such trees, well managed, would far exceed in profit a fine hundred acre farm.

"But the anxious inquiry is suggested, 'Will not our markets be surfeited with fruit?' This will depend on the judgment and dis-

cretion of cultivators. With the exception of the peaches of Philadelphia, and the strawberries of Cincinnati, a great deficiency is still felt in all our large cities. Of these two fruits, large plantations are brought rapidly into full bearing. The fruit, when ripe, quickly perishes, and can not be kept a week; yet thousands of acres in peach trees, bending under their heavy crops, are needed for the consumption of the one city, and broad, fifty-acre fields, reddened with enormous products send many hundred bushels of strawberries daily into the other. If, instead of keeping but three days, sorts were now added which would keep three months, many times the amount would be needed. But the market would not be confined to large cities. Railroads and steamboats would open new channels of distribution throughout the country, for increased supplies. Nor would the business stop here. Large portions of the eastern continent would gladly become purchasers, as soon as sufficient quantities should create facilities for a reasonable supply. Our best apples are already eagerly bought in London and Liverpool, where nine dollars per barrel is not an unusual price for the best Newtown pippins. And by packing in ice, Doyenné pears, gathered early in autumn, in New York, have been sold at mid-winter in Calcutta—peaches have been safely sent to Jamaica, and strawberries to Barbadoes. The Baldwin apple has been furnished in good condition in the East Indies, two months after it is entirely gone in Boston.

"Good winter apples always command a market. For the past thirty years, such fine varieties as the Swaar, Rhode Island Greening, and Esopus Spitzenburgh, have scarcely varied from twenty-five cents a bushel in some of the most productive portions of country, remote from market. Late keepers are sold early in the spring for more than triple that sum. An acre of forty good trees, with good culture, will average through all seasons not less than two hundred bushels, or fifty dollars a year. Instances are frequent of thrice this amount. The farmer, then, who sets out twenty acres of good apple orchard, and takes care of it, may expect, at no remote period, a return of five to fifteen hundred dollars a year, and even more, if a considerable portion is occupied with late keepers. This is, it is true, much more than the majority obtain; but the majority wholly

neglect cultivating and enriching the soils of their orchards.

"It is not, however, merely as a source of income, that the cultivation of the finer kinds becomes profitable. The family which is at all times supplied with delicious and refreshing fruit from its own gardens, has within its reach not only a very important means of economy, but of real domestic comfort. An influence is thus introduced of an exalted character; a tendency is directly exerted toward the improvement of the manners of the people. Every addition to the attractions of home, has a salutary bearing on a rising family of children. The difference between a dwelling with well planted grounds, and well furnished with every rural enjoyment, and another where scarcely a single fruit tree softens the face of bleakness and desolation, may, in many instances, and to many a young man just approaching active life, serve as the guiding influence between a useful life on the one hand, or a roving and unprofitable one on the other—between a life of virtue and refinement from early and favorable influences, or one of dissipation and ruin from the overbalancing effects of a repulsive home. Nor can any man, even in the noon or approaching evening of life, scarce fail to enjoy a higher happiness, with at least an occasional intercourse with the blossoming and loaded trees which his own hand has planted and pruned, than in the noise of the crowd and tumult of the busy world."

As regards my own experience, I have found no difficulty in disposing of my peaches and plums, at from ten to fifteen shillings per bushel, while plenty of these fruits were in the same market, but of common quality, selling with difficulty at from two shillings and sixpence to five shillings per bushel. The best varieties will bear as much, and often much more than the inferior, while the cost of culture is the same, and the cost of gathering, owing to the larger size, is much less.

JAMES DOUGALL.

Rosebank Nursery, Amherstburgh, Canada.

Proposed Remedy for Stealing Fruit.

MANY farmers in this vicinity are deterred from cultivating fruits, from the fact of its liability to be stolen by unruly boys, not to say men, or animals in the shape of men.

Now, if we lived among Arabs, we should probably expect this; but in a civilized community, governed, as we claim to be, by laws, and where a very large proportion of the inhabitants are themselves cultivators of the soil, this state of things is really too bad. Having seen various remedies suggested, such as bull dogs, tartar emetic, hedge fences, etc., I have thought of proposing a plan, which, if thoroughly carried out, I have no doubt would be more effectual than all others combined. Let every person, who occupies a single rod of ground, plant a grape vine, a peach tree, a pear tree, an apple tree, and, if natural fruit, graft or bud them with some of the best varieties in the neighborhood. Plant also a few cherry stones, if you can find no tree that you are able to buy; set out a currant bush, or raspberry plant, by the side of the fence—and almost any person can have these given to him, if he will only take the trouble to set them in the ground; or, if not given him, the expense is a mere trifle, a few shillings at most, and my word for it, no man who knows the pleasure, yes, the *pleasure*, of cultivating, and the vexation of having them stolen, will ever be guilty, nor suffer his children to be guilty, of such meanness afterward.

But it may be said, "I have no land to spare for such things as these; I must raise what will turn to the most profit." Now, I ask, what will pay better than fruit of almost every kind, at the present day? Beside, would you not prefer being at a little trouble, or even a trifling expense, to raise these things, rather than have your children pilfer, or even beg them of your neighbors? But it will be said, "I shall not live long enough to enjoy them, if I do take all this trouble." Are you sure of that? You can probably get a fair crop of grapes in two or three years, if you will simply train a vine to your house, or plant it in your garden or yard, and set a pole by the side of it to run upon; and so with al-

most every kind of fruit tree. They will bear in much less time than is generally supposed, if they are only taken care of. But supposing you do not live to enjoy it yourself, do you wish to do nothing for your children? or do you wish the world to be no better of your having lived therein? If so, go on in the "even tenor of your ways," and encourage your children to "follow in your footsteps," and your wish will probably be gratified.

—*Am. Agriculturist.*

S. E.

FRUIT IN CELLARS.

A great deal of winter fruit suffers early decay, in consequence of a deficiency of ventilation, especially during autumn, and after the fruit is deposited. Another cause of decay is the improper location of the shelves or bins, which are placed against or around the walls. By this inconvenient arrangement, the assorting of decayed specimens must be done all from one side, and the shelves must hence be very narrow, or the operator must stretch himself in a most irksome horizontal position. The circulation of the air is at the same time greatly impeded by the want of space next the walls. To avoid these evils, the shelves should be in the centre, with a passage all round. This allows circulation of air; and the shelves may be twice the width, with the same conveniences in assorting or picking. If suspended from the joists above on stiff bars, rats cannot reach them. We have never succeeded so well by any other as by this arrangement. It is said that the Germans are very successful in the ventilation of their cellars, by a communication with the principal chimney, the heated air in which necessarily maintains a current, which sweeps out the noxious and stagnant gases from the vegetable and other contents.—*Albany Cultivator.*

FROM TENNESSEE.

A short time since, an elegant looking periodical was placed in my hands—which, upon examination, proved to be the first number of a new journal edited by Dr. Jno. A. War-der, at Cincinnati, O.

The Horticultural enterprise of the *western country* has already created a great sensation throughout America—though comparatively a new region, its orchards furnish most abundant supplies of excellent apples and other

fruits, and on the banks of the Ohio, the vineyards are multiplying in such a ratio, as to promise a rivalry with those of the Rhine. If we have reason to admire the enterprise which causes this rapidly progressive production of fruits in the western States, how much more do you surprise and benefit us, and the world at large, by producing such a publication as I have to thank you for; (enclosed you will find the amount of my first year's subscription.) Allow me at the same time, Mr. Editor, heartily to congratulate you upon the bright auspices which must and will attend your undertaking.

I can imagine you are now sitting under your own vine, which your own hands have planted and trained, within a few years; with the gratified feelings of a successful improver, you can take pleasure in looking back through the vista of time, not very long neither, to the period when all around you was nature's own primeval garden: the garden still remains, but how changed! no longer nature's own, it is now in a widely different condition, yielding, under the hands of judicious cultivators, an abundance of nature's precious gifts, which she appears joyously to dispense to those who seek the rich reward of labor. From the retrospect, with such environment; you can not fail to lift the veil of futurity and fancy a most lovely view in the anticipation of the *prospective* before you, which must be realized within a few short years, if not even now in progress. There you behold nature's

most beautiful landscapes waiting but the hand of art, and master workmen to put on the finishing touches of the picture, gardens, vineyards and orchards of all kinds of fruits to vary the scenery; on favorable sites which are still unoccupied, the mansions of the wealthy and the cottages of the humble are yet to be erected, all around you, and these are to be adorned with verdant lawns studded with beautiful evergreens and other ornamental trees and shrubs, while the parterres are bright and fragrant with roses and flowers of varied hues. Mr. Downing has anticipated this progress, and has prepared his beautiful work as a guide for his countrymen, which all must admire.

The agriculturist has still to contend, in many places, with the primitive forests, and the plow must yet stir up wealth from beneath the unbroken sod of our prairies before all the glorious beauties of our country may be developed, as they will be with the progress of Horticulture and Landscape Gardening. In the meantime, let us rejoice that while reading your Review, we may all meet as one happy company, to while away a leisure hour by pleasant interchange of thought and sentiment, while we consult together and manifest our zeal for progress, which can not fail to lead our Great West to glorious fame.

Respectfully, yours,

JAMES STEWART.

Memphis, Tenn., December, 1850.

ANCIENT FLOWERS, THEIR IMPROVEMENT.

Among the many follies which the gardening world commits, none is more striking to the looker on than the eagerness with which old favorites are deserted for new ones. Of all inconstant lovers, gardeners must surely be the most inconstant. To-day they are at

the feet of a Dahlia, to-morrow there is no beauty like a Pansy, and both are presently deserted for a Cineraria. In their eyes old age is crime, and aged flowers are mercilessly consigned to the poor house. We remember when Cape plants were the rage; a Bruns-

visia, or an Ixia, or a Protea, were standing toasts; to possess such fair objects, was the height of a man's ambition. But in a few years these were thrown aside, and New Holland beauties supplanted them; to be succeeded by the flaunting, or shy and delicate natives of Spanish America. If we look into an old garden catalogue, we can but wonder how the flower-garden was decorated by our fathers; for there, we find little beyond races now known only by name.

Marygolds, Candytufts and Larkspurs; Love-lies-bleeding, Globes and Balsams; Catch-flies and coxcombs; Daisies and Dittany, Persicarias and Princes' Feathers, Lupines, Tricolors and Marvels of Peru, Sun-flowers and Sweet Sultans. Pride of the 18th century!—ye all have fallen victims to the flickering meteor called taste; and are now only to be found in the old drawers of old seed shops, where you are but the curiosities of floriculture; or in remote country gardens, not yet reached by steam or electricity. Even in acknowledging an acquaintance with Holyhocks and China Asters, we do so under a feeling of something like shame at being known to keep such doubtful company.

Are these follies to have no end? Shall we never be wise enough to look upon all flowers as equal? Do we not yet know that what is called the difference in their attractions, is but a difference in our skill in managing them? and that they are all endowed with wondrous beauty, varying in kind, but the same in nature? Most especially must we inquire whether the arts of the cultivator should be limited, as they are, to the domestication of a few fashionable races, to the entire neglect of the ancient inhabitants of the flower-garden. A Holyhook is as showy as a Dahlia, infinitely more graceful, much easier to cultivate, as prone to run into varieties, and hardy instead of tender; yet the lumpish Dahlia is seen everywhere, societies

are formed to admire it, and to gamble in it, and the Holyhook is consigned to a few places where, as at Shrubland, refined taste still excludes fashionable vulgarity. The Amaranths are a race peculiarly suited for rich autumnal decoration, quick growing, many-sized, and long enduring; no doubt susceptible of further change, but they are abandoned for the sake of Petunias and Chrysanthemums.—Surely it would be wiser to try to improve these ancient races, which are so well suited to our climate and our purses, than to limit our skill to tampering with the constitution of the delicate, though brilliant, strangers that have taken so entire possession of our affections. Let no man say that they are incapable of improvement: who has made the experiment?—and tried to cross the Prince's Feather with the Coxcomb, or Love-lies-bleeding with the Tricolor, or the Bee with the Dwarf Larkspur, or the Persicaria with the straggling Buckwheat, or the Indian Pink with the Carnation, or the Marigold with the Coreopsis? Until these trials have been made with at least as much care as with the Calceolaria, or the Pansy, we must be permitted to say that our ancient friends are not fairly treated, and that we are doing ourselves much disservice.

We shall be told that experiments of the class suggested are hopeless. We believe them to be likely to lead to important consequences, especially in those cases where the result of success would be to improve a perennial by the aid of an annual—a very material consideration. At any rate those who have no better means or greater skill than are required to deal with a Pansy, may find other plants on which to exercise their patience. Take, for instance, the neglected Daisy, than which no species could be selected which more strikingly illustrates what art may do with the neglected flowers that we trample under foot, or what may be expected in gar-

dening from a combination of patience and skill.

Every body who recollects the cottage gardens of his youth, will remember the double Daisies which grew there on the borders and under the bushes, pink, white and red, along with the wonderful Hen and her Chickens. Where are these flowers now seen except in such places, and among the poor man's plants in Covent-Garden? Yet they are exquisitely beautiful; of the easiest management; as prone to vary in form and color as a Chrysanthemum, to which they are nearly related, as fixed in their characters when they are obtained. But the great florists of England neglect them; and leave to Germans the honor of producing a race of native flowers which will bear comparison with any of their tawdry exotic rivals. In the catalogue of

Mr. VAN HOUTTE, the active and intelligent nurseryman of Ghent, twenty-five distinct varieties of double Daisies are offered for sale. What sort of varieties they are, may be learned from a representation of eleven sorts lately figured in his *Flores des Serres et des Jardins de l'Europe*. Than the group thus produced it is impossible to imagine any thing more beautiful; white, rose tints, white tipped with rose, quilled, red-eyed, richly variegated, they appear to combine everything that is most worth having in the Dahlia, with their own peculiar elegance and diminutive stature. We trust that they will speedily find their way to the gardens of this country, and that they will be looked upon as heralds of other, though not more admirable changes, to be wrought among the rejected favorites of the North.

DR. LINDLEY.

ANOTHER CERTAIN METHOD OF HAVING ABUNDANT CROPS OF PLUMS.

DR. WARDER: A writer in the December number of your Review, gives us a certain method of protecting our plum trees from the curculio, for nine years. A favorable number this, and after enjoying a full crop for nine years, charity for the poor curculio, should lead us to give him a jubilee. This is a longer period than was allowed by the Jewish law. I believe by that law, they might have been allowed a feast every seventh year. But to the remedy. When the blossom is ready to drop, he removes all the earth from under the tree, three inches deep, and replaces it with earth from where there are no plum trees, and puts the curculio earth in its place, or in a hog pen. If the insect lies within three inches of the surface, and is removed, there is no danger of the curculio springing from the new deposit. But there is one important question, on which your correspondent has not advised us. The curculio, is a winged

insect, fond of society, and visits his neighbors. Does your correspondent make a written contract (I would not trust a verbal one) with the insects, that they will not return to their old home? This is a natural feeling, as you will find the warm-hearted Scotchman, pining to return and visit even his barren hills, and a Jerseyman his sandy plains. Again: If by the removal of the earth, you take with you all the insects, and have a full crop of plums the next season, there are no insects in your plums, none to deposit their eggs, and have their young drop on the ground. The earth beneath your tree, is as free from them as any other spot in your garden, and no subsequent removal of the ground is necessary. If by said contract, verbal or written, you are thereafter secure in having a full crop of plums, I can see no cause for subsequent removal of the ground, unless the contract only bound the insects

not to migrate for a single season, allowing them the ensuing winter to return to their old stamping ground. It seems the famous salt remedy, of some of our Horticultural friends, has exploded, and also the lime, and tobacco theory. I am surprised at their fondness for lime. I might suppose a small quantity of salt would gratify their appetite, but like the great men of the earth, I should expect them to live on tobacco. This is a great age.

By knockings, we are holding communion with the spiritual world, whether by the agency of angels, or his satanic majesty, does not appear to be clearly settled, as an East-

ern Divine informs us they sometimes swear. But in earthly matters, and especially when contending with the curculio, I am disposed to consult the old adviser—common sense. Round the back part of my house, in a wide brick pavement, I have thirty-one plum trees. In twenty years I have not lost a crop by the ravages of the curculio. The plum trees, scattered through my garden, have in that time borne two crops only; for eighteen years, not a single plum escaped the curculio.

"Facts are chieft that winna ding,
And canna be disputed."

Yours respectfully,

NICHOLAS LONGWORTH.

GARDENING.

THIS art is unquestionably one of the oldest known to man. Our first accounts of the human family are associated with Eden, the pattern of all gardens since, though the state of the art was then very different from that of the present day. In the earliest times it was probably more like orcharding than gardening, though as Solomon long afterward assured us that there was nothing new under the sun, it is fair to assume that Eden was fully supplied with flowers as well as fruits, though probably in their natural state and pristine simplicity.

Flowers were not cultivated to any extent before the Christian era. The variety of cultivated flowers was limited, among the ancients, but the taste for these exquisite beauties increased with the advance of architecture and the other fine arts, as a natural consequence, harmonizing with the development of mind and growth of taste in other departments of culture as man emerged from the savage state.

We must wonder, when we read of the celebrated gardens of Semiramis, supported

as they were upon pillars and scaffoldings, at great expense of labor in their construction, and at exceeding inconvenience in supplying water. The great city of Babylon was remarkable for its hanging gardens, producing, however, trees principally. The Greeks, though a most energetic people, and far advanced in many of the arts, do not appear to have pursued gardening as we understand it; their grottoes, were rather lounging places and cool retreats than gardens, and indeed our arbors may be considered their representatives in modern times. The Italians manifested greater refinement of taste in this art, than their predecessors. They generally selected sloping grounds, which were supported by walls; an improvement, however, upon the Babylonish plan. They, too, were the first to introduce fountains and jets d'eau which give so charming an effect to the rural scenery.

Pliny the younger appears to have had a great taste for landscape gardening. In his time we first read of the box tree being cultivated. Then, too, grass plats were first

out into characteristic forms, and gardening appears to have been practiced with some skill. Some of the devices of his day are still maintained in the gardens of the curious. The climate of Italy, too, was so mild that they were able to cultivate those beautiful plants, the orange and the myrtle, which have ever been the envy of less favored climes.

The French have always exhibited a great penchant for the garden, and though their style was very formal and stiff, it has been greatly modified of late years by the influence of her opposite neighbor, England, and their systems are now the admiration of the world.

The Dutch have been celebrated gardeners and remarkable for two things: their *bulbs*, and their fantastic devices in trimming trees; too grotesque, however, to be considered handsome or in good taste, because so wholly unnatural. Indeed, nothing can be considered beautiful in the garden, if it be in opposition to nature. Though the Dutch have made rapid advances in the art and their bulbs are sent to all parts of the civilized world, they still retain their fondness for the grotesque plan of trimming their trees into the forms of animals and houses, much to the annoyance of visitors, who sometimes receive a shower bath from a concealed jet which bursts upon them as they approach within a certain distance. This is childish

sport for so grave a people as they are represented to be.

The English may be considered *the gardeners* of our day, being more conversant with the art than any other nation, not only the rich, but the poorest cottager has his plants to cultivate. Still the English have their faults as well as other nations. In England, however, as before remarked, the taste pervades all ranks, and their efforts deserve much praise, as they desire to bring the art to its greatest perfection. They employ Botanists, sending them at great expense to all parts of the earth, to gather up the native beauties of the wilds, and bring home everything that is calculated to decorate their gardens and green-houses. Nor are their efforts confined to the glass-houses, for they have more taste in laying out the grounds, and in perfecting the landscape garden than any other people.

Lastly, our own country has made rapid strides in these arts, and bids fair to take the foremost rank among the gardeners of the world. All that we lack is time to perfect what we have undertaken, and to correct some errors; but with our mixed blood we have received an impress from all the other nations, and how could it be otherwise than that the offspring of so many gardening parents should imbibe a taste, nay a passion, for the pursuit of this glorious art of Gardening

T. W.

THE PHILOSOPHY OF FORCING.

A distinguishing feature in modern horticulture is the fact, that principle is permitted to guide practice. To such must be attributed the rapid advances in every department of gardening, which the last quarter of a century has witnessed. There is a very startling fact, for that now happily almost obsolete class of men, who treat horticultural

literature with disdain, and scientific deduction, bearing upon their art, as mere toys for the scientific, in the circumstance, that with the growth of garden literature, with the circulation and interchange of opinions, by means of the Gardener's Chronicle and other periodical journals, simultaneously have spread better systems of cultivation, and more exten-

sive knowledge of the capabilities of plants. By their aid a new fact becomes the progenitor of others. An idea conceived in one part, no matter how remote, is subject to the scrutiny of thousands of readers; its merits are tested and analyzed, its real advantages or defects are soon ascertained, and the results become the property of all who watch the progress of the art and philosophy of gardening.

The dissemination of principles is the peculiar province of the literature of any science. He who would learn practice from them, to the exclusion of that physical exertion which perfection in any art or science ever demands as a tribute from those who would attain perfection, would most assuredly reap disappointment.

I propose to glance at the physiological and other principles upon which successful forcing must ever depend; and, by way of commencing at the beginning, it may not be amiss to define what is the horticultural signification of the word forcing. Every plant requiring artificial heat cannot be considered as being forced, even though fruit should be the ultimate object. The imitation of a tropical climate must not be considered forcing; which I define to be the production of fruits or flowers at unnatural seasons, by natural agents artificially applied. And although the mere cultivation of tropical fruits involves much that is common to forcing, it cannot be considered as identical.

Adopting, then, the definition as given above, we shall find that the whole series of operations commenced in bringing about the ultimate desired result, may with propriety be divided into two distinct classes. The one I shall term the *preparatory* process, the other the *developing* process.

It is a law in all organic combinations of matter, whether simply organic or animal, that each process in its development is dependent for its healthy action upon some *previous* process in the chain of progressive life

in the individual. It is evident that by tracing this principle in its retrograde aspect, we ultimately arrive at the source of human penetration—a first cause. With this the present inquiry has nothing to do. The principle being established, I shall proceed, keeping it in view only as it bears upon the subject under discussion. And looking at it in its various aspects, the whole paraphernalia of mechanical operations involved in the routine of a forcing campaign is presented to us. Healthy roots, root pruning, luxuriant wood, laterals, summer pruning, in fact every operation which has the remotest influence on the constitutional or incidental vigor of the plant operated on, becomes a matter for grave inquiry. In the present state of physiology—admitted though it may be—we know little of the action of external influences upon the vital principle of plants. We know nothing of its nature but by its effects. There can be no question but that the study of the influence which external circumstances exert upon the vital principle of plants, is as important in the higher branches—aye, and the simpler too—of horticulture, as that of the relation between the mind and the body of man, is to the metaphysician and the human physiologist. But hitherto we have only regarded it with concern, in proportion to the effects produced. We must go beyond this. The rapid advance of scientific attainments among those who have the best opportunity of making observations, and of profiting by them, assures us that we shall do so. The progress of mental attainments may not inappropriately be likened to the physical accumulation of a snow-ball—the more it accumulates, the more rapidly it will accumulate. Let any one look back from the present horticultural eminence attained by our best gardeners, and what may they not expect of the future?

G. L.

Gard. Chronicle.

THE PANSY.

PROPAGATION.—The best plants are obtained by layering. By this term, we mean taking a branch of a plant, bringing it gently down to the earth, trimming off all the lower leaves close to the stem with a sharp knife;

having ready a sufficient number of hooked pegs, about four inches long; also a small basket of fine compost of loam and leaf mold in equal parts, with a little sand mixed among it. Then, having trimmed as many branches

all round the plant as you can conveniently lay down without crowding, take one up gently in your left hand, and just below the third or fourth joint make an incision (with a very sharp pen, or budding knife) sloping upward nearly half an inch. Put a small splinter of wood in the incision, or cut, to keep it open. This is not absolutely necessary, but for very choice varieties we recommend it. Having made the cut and put the splinter in, bring the branch gently down to the ground; hold it there with the left hand, and with the right take one of the pegs, thrust it into the ground with the hooked part resting upon the branch just hard enough to keep it firm in its place. This part of the operation must be very carefully performed, or the layer will crack off at the place where the cut is made. Proceed with the next, and so on all round the plant, till all the branches intended are layered. Then take some of the fine earth, and with the hand spread it evenly over each, leaving the tops exposed. Close the earth well to each branch thus layered, and give the whole a gentle watering with a fine rose watering pot. The operation is then complete.

CUTTINGS.—The other modes of increasing

good kinds is by cutting, and this is most generally practised. The first thing to attend to is to choose the situation for the cuttings. The north side of a low wall is the best—a wall is better than a hedge, as that has a draught of cold air through it. Stir up the soil with a three-pronged fork, breaking it fine. Then put a layer of four inches of light compost, like that used for layering; upon this, place a thin covering of fine sand. Press the whole gently down with a flat piece of wood; then prepare your cuttings. Choose the weakest shoots for that purpose; the strong ones are too full of sap. Cut them across just under a joint, making them three inches long. A hand-glass will assist them materially in forming their roots. Only a part will grow without the glass, and they will take a much longer time, therefore use the glasses. Set the hand-glass on the soil so as to leave an impression, and within that impression with a small dibbler, or planting stick, put the cuttings in rows at three inches apart from row to row, and from plant to plant. Then, as with the layers, give a gentle watering, and as soon as the tops are dry, set on the hand-glasses. In about six weeks they will be rooted.

T. APPLEY.

The Principle on which Plants are Propagated by Cuttings.

THE propagation of plants by cuttings, is an operation of frequent use, and of considerable importance in all horticultural establishments. The many thousand plants that are annually propagated to embellish flower gardens and pleasure grounds, and the taste displayed in the arrangement of colors, demand the greatest skill, vigilance and forethought to prepare, to arrange and to provide for the display.

The conditions necessary for the propagation of plants by cuttings are, a certain portion of organized matter, the assistance of leaves, a degree of heat and moisture accordant with the nature of the plant, and free drainage at the roots.

When the ascending sap reaches the leaves, the water is discharged through the minute invisible pores, and by the decomposition of carbonic acid gas, which separates to carbon, and sets the oxygen free, a vital action is performed, by which the sap is changed into the

organic matter, or descending sap. It is then that all parts of the plant are supplied with a store of organized matter, which renders the parts fit to be employed as cuttings. When removed from the parent, that store, under proper management, will enable them to put forth roots and new leaves, and develop all the parts required for the growth of the plant. If the shoots are in a rapid state of growth, full of rising sap, their tissues lax and not matured, failures may be expected to attend all attempts to propagate them by cuttings.

The next part of the subject is to inquire in what manner the leaves retained on the cuttings assist the protrusion of roots, and the development of other leaves.

As the removal of the cuttings from the parent branch will make no change in the nature of the sap, which is always more or less in circulation in the whole system of the plant, and it is the office of the proper juice

to descend in the cuttings to the joint at which it was out; when its downward course is impeded, it accumulates there until a cal-
lus is formed, and roots are protruded; the organized matter of the cutting is diminished to supply the development of roots, and leaves are required to secrete more, to re-

place that which was expended in the formation of roots. It is when there is sufficient organized matter in the cutting to supply the roots, without exhausting its own vital energies, that the external assistance derived from the leaves may not be needed.

Scientific American.

HOW TO MISMANAGE A GARDEN.

UNDER this head a facetious writer in the *Gardeners' Chronicle* gives some capital raps at the stupidity of some gardeners, and at the same time affords most excellent instruction to those who can understand his irony. The following is found in an October number, and the hints will prove seasonable:

Chapter 10.—If you have a greenhouse to keep, or a stove, or any such place, especially a greenhouse, great opportunities will occur for managing badly. Glass houses are sure to tell the observer, at the end of winter, what amount of talent of that sort is at the command of the gardener, or of the amateur who has no gardener.

The principal points to be attended to by him who wishes to spoil his plants, may be classed under the two heads of heating and airing; and in the first place of heating.

Never light your fire till the last minute in the day; put off and dawdle as long as you can; then, when the cold begins to be sharp, make up a rousing fire and get the heat up as quickly as possible. By this means you may accomplish three things of importance in mismanagement; you are sure to waste half your fuel, you may crack the flue, and you must keep your plants growing at night, which is the wrong time. By these simple means you encourage the coal merchant, find a job for the bricklayer, and make a mess of your plants. If the flue is cracked and the bricklayer is not to be found, the smoke will make its way into the house; this will give you an opportunity of opening the sashes to let the smoke out again, and of cooling down the house by bringing in cold air—a method particularly advantageous at Christmas time. These little inconveniences are obviated by lighting the fire early, and getting the heat

up slowly; but that is only good management, of which you are not in search.

When you put fuel into the fire-place, pitch it in as far as you can; in that way you will be certain some day to have the satisfaction of blowing up your flue—an interesting philosophical experiment which will enable you to understand the effect of uniting gases so as to produce an explosive mixture. If you bank up your fuel close to the door of the fire-place, this cannot happen; the fire will burn better, and there will be no waste; but that again, is good management which is to be avoided.

Never cause your flues to be cleaned of soot till the plants are brought into the house for the winter. You can then try whether the flues will draw; perhaps they will, and then you need not have them cleaned till they catch fire, and burn the house down; perhaps they will not draw, and then you can have them cleaned as well as at any other time. As to the dust and soot dirtying your plants, why, you can wash them again, and very likely they will look as well as ever.

Never consider with how little fire plants may be preserved; that would be good management. On the contrary, keep the heat up well, most of all, at night; in that way you are sure to have tender, pale green leaves and shoots with pale flowers, and not many of them. It is surprising how delicate and interesting a collection of greenhouse plants may be made to look by such means. As to resting your plants never think of such a thing; what is the use of plants at rest? They might as well be dead. Keep them always growing, and fastest in the autumn. In that way you may depend upon bringing them into the worst possible state in the least possible time.

Never give air in winter; plants managed

as is here suggested cannot bear it. Shut the houses up close, and keep the fire going. Why should plants have air? If that is what they want, they might as well be out of doors, where they will have plenty of it. As for their breathing, and in that way spoiling the air about them, who ever saw a plant breathe? If it did breathe we must see it. We do not see it, therefore it does not breathe.

When you water your greenhouse plants in winter, take it cold from the pump, or the tank outside, and dash it over them. As

they cannot feel, the coldness cannot hurt them; and it saves the trouble of warming the water. An amateur has been known to spoil his whole crop of early grapes and forced strawberries in this manner; and it cannot be denied that that is as good an example of mismanagement as could be desired.

Instructions like these are too valuable to be mixed with others of a different nature, and therefore I pause, in order to give you time to think them over, and see how they can be made to suit your case. K.

Extract from Downing's Letters from England.

THE NATIONAL GARDEN AT KEW.

I have just come from a visit at Sir WILLIAM HOOKER's at Kew Park. He is the director of the Royal Gardens at Kew, a short distance from his house, where we spent almost the entire day together, exploring in detail the many interesting features of this place, now admitted to be the finest botanic garden in Europe.

It is only within a few years that Kew gardens have been given up to the public; and it is wholly owing to the spirited administration of Sir Wm. Hooker—so well known in both hemispheres for his botanical science—that it has lately reached so high a rank among botanical collections.

When you hear of a *garden*, in America, you fancy some little place, filled with borders and beds of shrubs and flowers, and laid out with walks in various styles. Dispossess your mind at once, however, of any such notions as applied to Kew. Fancy, on the other hand, a surface of about two hundred acres; about sixty of which is the botanic garden proper, and the rest open park or pleasure grounds. The ground-work of the whole is turf; that is, smoothly mown lawn in the sixty acres of botanic garden, and park-like lawn, occasionally mown, in the remainder. Over this is picturesquely disposed a large growth of fine trees—in the botanic garden, of all manner of rare species, every exotic that will thrive in England—growing to their natural size without being in the least crowded—tall pines, grand old Cedars of Lebanon, and all sorts of rare, deciduous trees. Between the avenues and

groups are large open glades of smooth lawn, in which are distributed hot-houses, ornamental cottages, a large lake of water, parterres of brilliant flowers for show, and a botanical arrangement of plants, shrubs, and trees for scientific study.

In the center of a wide glade of turf rises up the new palm-house, built in 1848. It is a palace of glass—362 feet in length, and 66 feet high—and fairy-like and elegant in its proportions, though of great strength; for the whole, frame-work and sashes, is of cast iron, glazed with 45,000 feet of glass. You open the door, and, but for the glass roof that you see instead of the sky above your head, you might believe yourself in the West Indies. Lofty palm trees, thirty or forty feet high, are growing, rooted in the deep soil beneath your feet, with the same vigor and luxuriance as in the West Indies. Huge clusters of golden bananas hang across the walks, and cocoa nut trees, forty-two feet high, wave their tufts of leaves over your head. The foliage of the cinnamon and camphor scents the atmosphere, and rich air-plants of South America dazzle the eye with their strange and fanciful blossoms. Most beautiful of all are the *tree ferns*, with trunks eight or ten inches in diameter, and lofty heads, crowned with plume-like tufts of the most delicate and graceful of all foliage. From the light iron gallery, which runs round the inside of this tropical forest-conservatory, you look down upon the richest assemblage of vegetable forms that can be conceived; while over your head clamber, under the iron

rafters, in charming luxuriance, the richest passion flowers and other vines of the East India islands.

In the open grounds are many noble specimens of hardy trees, of great beauty, which I must pass by without even naming them. I saw here the oldest Deodar Cedar and *Araucaria imbricata* in England, each about twenty-five feet high, and justifying all the praises that have been lavished upon them; the former as the most graceful, and the latter the boldest and most picturesque of all evergreens. The trunk of the largest *Araucaria*, or Chili pine, here, is of the thickness of a man's leg; and the tree looks, at a distance, like a gigantic specimen of deep green coral from the depths of the ocean. I was glad to know from experience, that these two noble evergreens are quite hardy in the northern states. You may judge of the scale on which things are planned in Kew, when I mention that there is a wide avenue of Deodars, newly planted, (extending along one of the vistas from the palm house,) 2,800 feet long. A steam engine occupying the lower part, and a great reservoir the upper part of a lofty tower, supplies, by the aid of concealed pipes, the whole of the botanic garden with water.

Now that I have perhaps feebly given you a *coup d'œil* of the whole, (omitting numberless leading features for want of time and space,) you must, in order to give the scene its highest interest, imagine the grounds, say at 2 o'clock, filled with a thousand or twelve hundred men, women and children, of all ages—well dressed, orderly and neat, and examining all with interest and delight. You see that they have access, not only to the open grounds, but all the hot-houses, full of rare plants and flower gardens, gay with the most tempting materials for a nosegay. Yet, not a plant is injured—not the least harm is done to the rarest blossom. Sir WILLIAM assured me that when he first proposed to try the experiment of throwing the whole collection open to the public, many persons believed it would prove a fatal one; that, in short, Anglo-Saxons could not be trusted to run at large in public gardens, full of rarities. It has, however, turned out quite the contrary, as he wisely believed; and I learned with pleasure (for the fact has a bearing at home,) that on days when there had been

three thousand persons in the garden at a time, the destruction committed did not amount to the value of four pence! On the other hand, the benefits are not only felt indirectly, in educating, refining, and elevating the people, but directly in the application of knowledge to the arts of life. I saw, for example, artists busy in the garden, who had come miles to get an accurate drawing of some plant necessary to their studies; and artisans and manufacturers in the museum, who had been attracted there solely to investigate some matter connected with their business, in the productions of the loom or the workshop.

I must beg you to tell my lady friends at home, that many of them would be quite ashamed were they in England, at their ignorance of gardening, and their want of interest in country life. Here, for instance, (at Wimpole,) I have been walking for several hours to-day through these beautiful grounds with the Countess of H., who, though a most accomplished person in all other matters, has a knowledge of everything relating to rural life, that would be incomprehensible to most American ladies. Every improvement or embellishment is planned under her special direction. Every plant and its culture are familiar to her; and there is no shrinking at barn-yards—no affected fear of cows—no ignorance of the dairy and poultry-yard. On the contrary, one is delighted with the genuine enthusiasm and knowledge that the higher class (and indeed all classes) show in the country life here, and the great amount of health and happiness it gives rise to. The life of an English woman of rank, in the country, is not the drawing-room languor which many of my charming country women fancy it. Far from it. On the contrary, it is full of the most active duties and enjoyments. But it must be admitted that the cool and equal temperature of the summers here, is greatly more inviting to exercise than our more sultry atmosphere at home.

We measured, in the course of the morning's ramble, several English elms, with which the park here abounds, from 15 to 18 feet in circumference.* The trees in England have a more uniform deep green tint than with us, which I think rather lessens the richness and variety of the landscape.

* But, after all, not so noble or beautiful as, in their heads, the American elms in the Connecticut valley.

Horticultural Show at Cincinnati.

THE following very flattering account of our autumnal exhibition which we strongly suspect was written by our friend Barry, is furnished by the Genessee Farmer:

The brilliancy of this exhibition took us quite by surprise. We expected something fine—we were aware that the most liberal arrangements had been made, and that there was abundant material in that city and vicinity, for a grand display; still, as we have already said, it took us completely by surprise, so admirable was it in all its parts. We felt fully compensated for our journey, with the gratification it alone afforded us. We have seen some of the best shows that Philadelphia or Boston has produced; and although this was defective in the display of pears and foreign grapes, yet, as a whole, considering the articles exhibited, the arrangement, etc., we consider Cincinnati up, if not a little ahead of either; and this is saying a good deal.

The show was held in a splendid hall nearly one hundred feet long and fifty feet wide. On either side was a table, the whole length covered with fruits—not *little, shabby, half grown specimens, one of a kind*—but superb dishes of those magnificent golden and crimson fruits of the west—Fall Pippins as large as a man's head, and peaches that would almost weigh a pound. What a display of fruits! The "Queen City" and the "Mighty West" might well be proud of it. Then, in the center of the room were three tables, with a walk between each, filled with flowers, flowering plants, and floral designs. The center table was appropriated to the designs and taller plants. At the end of this table, just oppo-

site the entrance, was a decorated arch, supported by two columns, mossed and ornamented with flowers, and with nuts of the Buckeye. The words "Buckeye welcome" were tastefully wrought on the arch, with the nuts, and on the top was the American eagle. This tasteful object was the handiwork of the Misses ORANGE, and sold, we understood, for the sum of \$50, at the close of the exhibition. There were many other very beautiful designs. At the further end of the room we noticed a villa residence in miniature, by Mrs. WM. HEAVER; the grounds all laid out and planted with much skill and taste, and just opposite, a very pretty design of a flower garden, laid out and planted. The two side tables were occupied with smaller plants, dahlias, etc. Messrs. JACKSON, HEAVER, SAYERS and others, exhibited pot plants, many of which were new and rare, grown in the best manner. Indeed, we think they would do credit even to a Chiswick fete. A better collection of pot plants, and better specimens, have, we are very confident, never before been exhibited together in this country.

The liberal management of the Society brought out this grand display, and it was well rewarded. We were glad to see the great hall filled—thronged—evening after evening, and every visitor go away delighted. *One thousand dollars* were received at the door, and six hundred dollars were received at the sale, making \$1,600 receipts. We congratulate the officers and members of this very excellent Society on the success which has crowned their efforts on this occasion. It affords them great encouragement for the future.

Queries.

THE following queries have been received, and are presented to the readers of the Review, in the hope, that some of our gardeners will be induced to take up their pens, now that they are frozen out of the soil, and answer them in a common sense practical way.

What objection is there to the cultivation of the grapevine on trellises in vineyard culture, for the making of wine?

What is the most effectual means of destroying the curculio on the Plumb and Nectarine?

How far is the double shift in potted plants justifiable, and is hard pressing of the compost proper in potting?

Is there any advantage gained in making asparagus beds by the division of old roots?

Lexington,

W. E.

The Manetti Rose—an Autobiography.

SOME time in the year 1836, or it might be, 1837, my master, Signor Manetti, then living on the banks of the Lago de Como, and in whose garden, (Oh! what a beautiful climate for gardening) I was growing, took it into his head to graft and bud some delicate sorts of roses into my branches. I was so foolishly good-natured as to suffer them to grow; aye, even to nurse them into a vigor foreign to their nature. Alas, that I should find such ingratitude in man; for my beloved master, seeing the effects of my careful nursing, immediately cut me in pieces, distributed a great portion of my branches among his friends, and the remainder planted in his own garden. I felt so strong an attachment to him, and such lively gratitude, for he was indeed the author of my being, that I determined to show him how docile and kind I could be. Accordingly I managed to put out roots from every shoot, however minute, little thinking of the consequences. Guess, then, my astonishment to find one day in November, a part, a very small part of myself with, unluckily, roots attached, packed in a small box, introduced into a large case called a "bookseller's parcel," and subdirected to a Mr. Rivers, living in a small obscure village, so I understood it to be, in England. "Alas! my beloved Como," I could not help saying, "must I then leave thee, thy sunny skies, thy charming waters, to live in exile in that foggy England, in a village with a barbarous name, quite unpronounceable to refined and musical ears—a name beginning with *S*, and ending with *h*; no, it cannot be." Such was my box soliloquy; the end of all this was my safe arrival at *Saw*—(I cannot write the remainder,) my being unpacked by a regular enthusiast, and my transference to a very pleasant locality and agreeable soil. The coolness of the climate, in contrast with my beloved, but rather too warm, Italy, delighted me; so I determined to enjoy myself by growing as fast as I could, even in what they call here the "heats of the summer." Poor creatures, they know not what heat is! I thought my new master would feel so delighted with my docility, that I should remain unmolested; but no, the moment he found it out, (for on his planting a small piece of me the first season I came into his possession, I put forth all the

roots I could,) he cut me absolutely all to pieces.

My axiom at the outset of life was, the well known precepts, "Return good for evil." I did not forget it; and every cutting rooted, while my ill-tempered neighbor, (*Rosa indica grandiflora*,) who came over in the same case, being cut up in the same way, would not put forth a root; I thought then he was wiser and better than myself, but now I think otherwise, for while I am daily making friends all over the world, my companion is unpruned, untouched, and despised for his selfishness. To pursue my narrative, my English master, taking advantage of my docility, propagated me largely, and distributed my offspring among his friends with a liberal hand. I cannot trouble you with all my adventures, for be it understood, although formed into cuttings innumerable, my spirit was not divided, my sympathy remained intact; I am able, therefore, to tell how that my master sent me over as a valuable present to a place with a long outlandish name called Berkhamstead, also into Hertfordshire. Many places and persons in this county are, I believe, very rude and barbarous. My new master at this place, Mr. L., did not seem to look upon me with a very affectionate eye, and for three or four years he insulted me very frequently, and cut me to the heart by saying, "What occasion have we for any new rose stocks, the dog rose is good enough for every thing. I think, Mr. Manetti, you are a *humbug*, like your Italian fiddlers and your English master who sent you to me. Here I lost the remainder of his speech; he has, however, lately atoned for past neglect, and has been very attentive and respectful to me.

My journey to Cheshunt, alas! has not been attended with the like result. My friend Rivers, wishing to make every one acquainted with my merits, sent me to his neighbor, Mr. P., some five or six years ago, with a very high character. Anxious to support this, I grew away with all the vigor I could muster, for I found the soil very rich, cool and agreeable. My rival, the Dog-rose, growing in the same bed, told me, with a malicious grin, that "the soil was too good for me." I despised the innuendo, and grew and towered up above him, looking down upon

him in the autumn with the same contempt that my new master, Mr. P., looked up to me, for he soon began to find fault, and said that I was too sappy, too luxuriant, in fact, good for nothing. Now, this was really very unjust, and I explained to him that I did not want so rich a soil, that I should indeed prefer Bag-shot heath, and that if I did not find friends at Cheshunt, I might be distributed among his customers, and perhaps find favor in poor, light soils. My master, however, seems to have what they call in my country "una testa di porco," a very expressive term, and would not listen to my defence. Were it not, therefore, for my old first friend, and some new friends at York, I should be in a most neglected state; but I hope for assistance from you, and in return, if you ever wish to bud me, I will not prick your fingers.

ROSA MANETTI.
Gard. Chron.

Mr. Rivers' Nursery, Sawbridgeworth.

Few nurseries afford so much information on matters relating to general gardening as that of Mr. Rivers'. An ardent lover of improvement in every branch of the business, he is continually trying experiments, the results of which are always interesting, and often highly instructive. Within the last few years he has erected several glass houses, in which not only utility, but cheapness of construction has been the objects aimed at.—Some of the houses have only a beech-hedge for the ends and back wall, in which stakes are set for the support of the roof, while the fronts, (not more than two feet high,) are left open. Under these circumstances, a constant circulation of air is kept up within, throughout the interior of the house in which although glazed with sheet glass of the cheapest and most common description, no scorching or burning ever takes place. One of these houses contained dwarf fruit-bearing trees of some of the finest kinds of pears, in pots; Coe's Golden Drop Plum, with its fruit enclosed in gauze bags, in which it will hang on the tree till December or later; and also a new plum, named Reine Claude du Bavay, having a fine flavor resembling that of the Greengage, but ripening its fruit a month later than that variety. In the same house were dwarf apricots and peaches, etc., all of which appeared to be in a thriving state,

and the peaches were producing excellent fruit.

In other houses of a cheap kind, but closed at the back, front and ends, vines were ripening good fruit upon the rafters, while figs planted out in the dry border beneath, and pegged down close to the soil, were covered with fruit in the different stages of development. On the back border, behind a narrow sunk path running up the middle, were peaches and figs in pots, in which they are to be kept permanently in a healthy and fruit-bearing condition by means of root pruning and liquid manure.—*Gard. Chronicle.*

Villa and Suburban Gardening.

THE purest of all pleasures may be derived from a garden; but in order that we may enjoy these in their fullest extent, high keeping and order must form one of its distinguishing features. Gardens frequently get into bad condition from the want of method in the management of the labor employed. We often find better dressed gardens where only one man is kept than in others of greater pretensions, and this is easily accounted for. The one man relies on no other person to do the work for him; he knows that if it is not done by his own hands, it must be left undone; he cannot fall back and lay the blame upon another. Of course, one man can only do one man's work; but those who have experience in these matters will understand what a man of system can do compared with one of no system. These observations apply with equal, or even greater force to the amateur who cultivates his own little garden during his hours of relaxation. The first rule to be observed, is to do everything in time; "procrastination is the thief of time." Suppose a few rows of Peas are to be staked, or a row of Scarlet Runners, a box of Cucumbers or Melons that require stopping or thinning; if these are left for a few days beyond the period when they ought to have been attended to, we well know the check they receive from being moved about, which is sufficient to destroy half the crop; delay, therefore, not only tends to defeat the object of cropping, but it also so affects appearance and kindly growth, that the real interest which gardening pursuits afford is blighted in the bud. Another and equally valuable rule is, never to have more than one job on

hand at once. The importance of this injunction will be apparent on a moment's reflection. Instead of any one matter being finished when it ought to be, the whole is delayed; consequently all suffer alike, whereas one matter, demanding attention, might be accomplished in proper season if followed up until it is completed. But independently of injury to the crops, confusion and disorder manifested everywhere in a garden must rob the proprietor of the pleasure he seeks in vain to realize in it. Let us also draw attention to the evils of such a system when applied to plant culture. In thousands of instances it renders the plant unworthy of the pot in which it is placed; creepers, if not trained in due time, get entangled, and the unraveling them injures and checks their growth. The performance of the operation, too, requires treble the time it would have occupied if effected at the proper period; I therefore earnestly counsel my amateur readers to do every thing in proper season, remembering the old adage "that delays are dangerous."

PHARO.

From the Gardener's Chronicle.

Asparagus.

Winter Dressings.—In the first place, I never root-prune the plants by throwing out deep trenches between the beds, as is too often done in very many cases; that is, by putting over the beds a good dressing of manure, then placing a line down the side of each bed, and chopping off the root that has found its way into the alley. Some of the best roots have thus run out into the alleys, which is not to be wondered at, for in the spring, say the month of March, these beds in most gardens are forked over, and much of the soil and rough parts of the manure are worked back into the alleys again. This, of course, is a comfort to the poor roots that have been exposed throughout the winter to all weathers, along the sides of these deep dug alleys.

I have assisted often in the above sort of work years ago, but for the last seventeen years, I have not dug out a single trench between the beds.

When the stems are cut away in the autumn, the beds are cleaned, if weedy, and carefully forked. A thoroughly good dressing of manure is put all over the beds equal-

ly, and when this is done the alleys are forked over too; while, for the sake of giving the whole a neat finish, a line is put down on each side of the alley, the edges made up a little, and, perhaps, a few crumbs from the alley may be thrown upon the beds, and the edges marked out with the point of the spade.—The work is then done for the winter; and, of course, the asparagus beds, neatly done up in this way, gives the kitchen garden a tidy appearance for the winter months.

Spring Dressing.—In the month of March these beds are again forked over carefully, the manure and soil well broken up and mixed together, and some of the rougher parts of the manure, with all the rakings, are forked into the alleys after the beds are raked over nicely, and lettuces are then sown and planted in succession for the summer months.

Cutting the Produce.—Now, although I have been a cultivator of asparagus for so many years, I have never been an eater of this much esteemed vegetable, therefore a thought did not strike me about the best way of cutting it, until one day some seventeen years ago, when I had an abundance of heads to cut from, *all of good length above ground*, I received orders for asparagus for a dish, and another for soup. The latter dish was to be heads all green. I well supplied the cook with heads green enough for her dish and for her soup; and a first rate cook she was. The next day when I waited upon her for orders, we had a little talk about the green asparagus for the table, when she told me the asparagus I had brought her the day before, was the best she had ever dressed. It was large, of good flavor, and *the whole eatable*. This was a good hint for me, for it opened my eyes greatly as to the management of the asparagus bed altogether, but the matter did not rest here, for my employer soon found me out to praise the asparagus I was then sending him in. And thus have I continued ever since, year after year, continually receiving compliments and inquiries about it from innumerable friends of my excellent employer.

Of course, those who daily eat these kinds of vegetables, must be the best judges of their quality; and in the act of cutting the single heads in this way, *taking only the part above the ground*, the operator can select the best-doing; and however inexperienced he may be,

he may cut a dish of asparagus without any loss. On the other hand, a person not used to this work, or with the usual long handled saw-tooth knife, for cutting, would make sad havoc among the underground shoots, or spoil hundreds for market; for with thrusting the knife into the ground to cut one head, he will probably break off two or three others unseen, at the same time. This old-fashioned saw-tooth knife I have not used since I cut asparagus above ground, that is, level with the surface of the earth; I use just what knife I may happen to have in my pocket at the time, and it often happens that my penknife is obliged to be used, from having no other about me at the moment. J. WEAVER.

Cottage Gardener.

From the Ohio Cultivator.

MANAGEMENT OF BEES.

I offer the following hints to those who may not have experience in the management of bees: Make your boxes of good quarter inch lumber, well jointed, so that the millers cannot deposit eggs at the top or corners; the top should project one inch all round, and instead of nails, use screws, so it can be taken off and put on without disturbing the bees. The size should be about twenty-two inches high, and twelve by fifteen inches broad, (unless the swarm is small,) as it is more convenient to get honey from large than small boxes. Robbing should be done immediately after the swarming season is over; there is no difficulty in this operation, if you first tie a sheet or table-cloth around the hive, so as to keep the bees inside, and, as you raise the top, sprinkle the bees with water, which must be continued more or less until done. An expert hand can soon extract all that should be taken, which must be regulated by the size and strength of the swarm. Fasten down the top as at first, and the bees will willingly and rapidly go to work and repair their loss. Place your boxes on a clean plank, under a shed, closed on one side. On the first day of May, raise your boxes on one-inch blocks, for the double purpose of ventilation, and to prevent the return of worms, that may have been expelled or thrown down from the inside by the bees; then split a few elder joints, and place them under the boxes; the worms will go under them, and by removing the elders once a day, or every other day, and killing the worms, it

will prevent any formidable injury. The above refers entirely to common boxes. There are many plans by which the honey can be taken much easier, and with less injury to the bees. Some adopt the old plan of using small boxes on top, which does very well; but the tops of these boxes should be screwed on. I have constructed a fancy improvement, (in which I find I was almost superseded by friend Mallory, of Bucyrus,) upon the last plan, by adding a second story to my boxes, with a door hung on small hinges, and fastened with a button, and putting in a box or boxes large enough to fill it up, with glass in front, so as to witness the depositing process, and to see when the box is full. I screw the lids on, and put a screw in the end for a knob to pull out by; and when I wish to take the box out, insert a piece of tin under the box, closing the communication between the main box and little one, then set the box some distance off, and the bees will come out and return to their home. The honey can be cut out; or, if there is another box to fit, I set the box away, and cut it out when wanted for use, which is much the best way, as the honey will not candy.

We have Dugdale's and other patents in use in this neighborhood, and, when properly attended to, are successful; but I think, with the same attention given to destroy the worms, as shown above, that it will require in the miller-catching patents, an apiarian will be about as successful in accumulating swarms and gathering honey.

Bees did well in swarming this season, and in making honey, up to the 20th July, but since that, have done nothing; they have not worked on the buckwheat as usual.

Respectfully yours,

JOS. C. BRAND.

Champaign Co., Sept. 21, 1850.

Plants in Pots.

Your Camelia does not bloom, because it did not set any flower buds last spring, when it made its growth for the season, and it probably did not form buds then, for want of proper soil or water at that time. It is precisely during the two or three weeks while it is growing, that it requires especial care. At that time, plenty of water, air, and sun, and twice a week some guano water, will give you an abundance of flowers next year.—*Horticulturist.*

THE FRONTISPIECE.

THE Greenhouse may be a miserable damp affair, filled with sickly plants which ill requite the labor and expense bestowed upon them, or it may be one of the most charming additions that can be devised for a country seat, especially during the winter months, when all nature is resting from the luxuriant growth of summer, and every tree, and shrub, and flower, is disrobed of its soft vesture of green and floral ornaments, of varied hues. How frequently have we fled to the greenhouse for relief from the out-door barrenness of winter, to be disappointed by meeting simply a collection of plants, badly kept, or indeed suffering for want of care, perhaps the necessary result of a bad structure; and how seldom has it been our good fortune to be ushered into a house which was entirely successful, where a complete mass of bloom, relieved by vivid green, and every appearance of healthy vigor, made us forget that old Boreas reigned supreme without, while we could imagine that the soft zephyrs of a sunny clime were fanning our cheeks, mid the orange and myrtle bowers of a tropical region.

Into such a place, gentle reader, allow me to introduce you—that is if you choose to overcome the distance which may separate us—for such a greenhouse does exist close by me, and its happy proprietor is always willing that the true lovers of plants and flowers should enjoy with him, the results of his admirable skill and perseverance. The readers of this "Review," have already been introduced to Wm. Rector, as one who is no *theorist*, but a practical philosopher; one who thinks well and executes admirably. So you must not be disappointed at the adaptation of every department of his greenhouse to the end proposed, nor at the happy results of his successful experiments. Do not for one moment imagine that the artist has given you

a portrait of the gentleman whom he has introduced as the genius loci, with his closely buttoned surtout and proud forbidding air. You may rest assured that it is no likeness of the proprietor, nor intended to represent him, but simply introduced to show the relative proportions of the building.

I consider this the prettiest and best greenhouse it has ever been my good fortune to visit, and am very sure that I have never seen so good a structure for the winter blooming of plants; nor have I ever beheld, in any greenhouse, so constant and abundant a succession of flowers of every hue, from November until May, as in this, and I have seen many, both public and private, in the Eastern States as well as in the West. But this must be seen, to be fully appreciated; its beauties are of a kind not easily described. No one possessed of the slightest appreciation for the beautiful, could be so dull, as to enter it without being at once impressed with its perfectness and its adaptation to the object proposed, to wit: a winter garden full of flowers. It is true this not being a sale garden, the flowers are not clipped so closely as where they are grown for profit, but the liberal proprietor deals them out with open hand, to his friends.

This house is fifty-six feet long by eighteen feet wide, and, as represented in the picture, it is raised above the level of the ground about it; the front wall, which is of stone, is two and a half feet high, upon which rests the sill of the house; within this wall there is an air-chamber of two inches formed by a parallel four inch brick wall that rises nearly to the surface of the border, which is thus protected from severe frosts that might have penetrated the wall.

The front and end are of glass, and being raised by the wall, allow the observer, ap-

proaching from without, an uninterrupted view of the beautiful flowers within, as the eaves and glass roof are above the range of vision. The roof being made of curvilinear sash bars, without any wooden rafters, is light and graceful in its appearance, and admits the greatest possible amount of sunshine, so necessary to the successful growing of plants. Indeed, I consider this the great excellence of the iron rafters or sash bars, which may here be described.

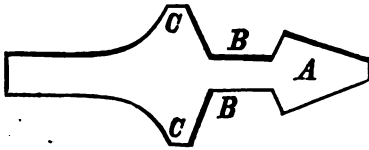


Fig. 6, Cross Section of Iron Rafter.

This figure represents a cross section of the rafter, which is two inches deep or wide. A represents the top or outside, B the gutter or groove for the glass, which is half an inch wide, C is the shoulder which supports the glass; it is wider than A, and so arranged that when the rafters are fixed, the glass can be dropped into its place without falling through.

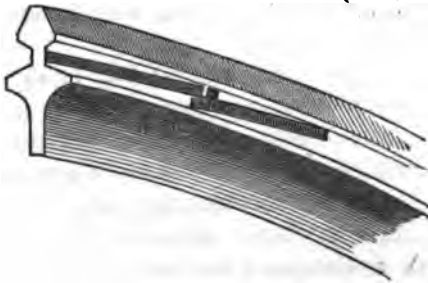


Fig. 7, stop on rafter.

To prevent the glass from sliding down the inclined plane of the groove B, stops are cast at intervals, to check this tendency.

They occupy the upper half of the groove, and their distance apart is calculated for the size of the panes of glass, which are so arranged that the upper end of each is just under a stop, and the lower one lapping a very little upon its predecessor—say the thickness of the glass rests upon the stop, as represented in fig. 7. This is much neater and better than the bent tin, and much more easily managed.

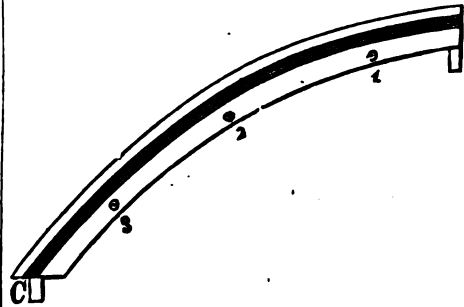


Fig. 8. Iron Rafter.

This figure represents an iron rafter, but to show both ends, it is not drawn in good proportion. The dark line represents the groove for the glass. C represents a pin, cast at each end of the rafter, for securing it in its place, and in setting up, the pin should be perpendicular. It is one inch and a quarter long, by three quarters of an inch in diameter, to fit into auger holes previously bored into the wall plates, at distances to suit the glass to be used. The figures 1, 2, 3, represent holes which have been previously drilled in the rafters at similar distances apart in all. After they have all been placed upon the plates, rods of iron, about a quarter of an inch thick, are passed through these holes, and through the inside barge board, and secured with nuts screwed firmly. Small pieces of wood are introduced between each pair of sash-bars to keep them in place. The second coat of paint is applied and the glazing is done, the workmen using boards

to support them. For a vinery the rafters have also small holes drilled at intervals for attaching the stirrups for the vine wires.

The architectural effect of the exterior of the structure, as represented in the lithograph, is exceedingly beautiful, the building being well proportioned, and a peculiar charm is furnished by the curved lines supporting the glass, in such a manner that it is apparently in continuous sheets from the top to the bottom. The uniformity is broken by a projecting pediment ten feet wide, with a sharp gable, constructed of the same kind of rafters, ornamented with pendants, enlivened with an octagon formed of stained glass in the front, and giving entrance, by a door, reached by two or three steps. Another entrance is made from the piazza of the dwelling, by glass doors, which open upon the floor of the greenhouse at the same level.

The roof inclines both ways, but the back rafters are only six feet long and made in the usual manner of wood and very light to correspond with the house; the sash are hung with balance weights. The back wall is higher than the front, and the upright sash, extending part way only, are also suspended upon hinges, like those in front, so that abundant ventilation can be furnished to the plants. Here, too, we find an excellent contrivance for locking or holding open the sash at any point that may be desired—an apparatus differing from any other, and remarkable for its efficiency as well as its ingenuity; the result of study and tact, instead of a mere copy of previous inventions. Hartley's patent rolled glass, described on page 197, is used in this house.

On the front and two ends is a border two feet wide, in which Mr. B. finds many plants succeed better than in pots. Heliotropea, Salvias, etc., flower here, from October till May. Some of the latter are now three feet in diameter, and covered perfectly with their bril-

liant blossoms. Hyacintha, Pansies, some kinds of Roses, Primulas, Polyanthus, and some Climbers, also succeed admirably in this situation, and keep up a constant succession of bloom throughout the winter. The Chinese Primulas in this establishment are the finest ever grown in this country, and would make the fortune of a Canton flower merchant. The Climbers are taken down and trained outside along the wall, in summer, which suits them very well, and prevents the encroachment of red spider.

Within this border is a pathway two feet wide, which communicates with one behind the staging and leads to the potting-shed, a neat little room ten feet by twelve, in the rear of the house. A tank in one corner furnishes a supply of water, always ready to use, and sustaining some aquatics. In the center, opposite the front door, an oval space is occupied by a table of appropriate specimen plants, surrounding a large vase of gold fish, which appear to enjoy their flowery vicinage. The shelving is made to correspond to the pathway crossing the stage at this point, so as to produce the best and most showy effect with the beautiful specimens that are displayed upon them.

This house was heated last year by means of hot air upon a modification of the Polmaise plan; the hot air furnace being under the adjacent dwelling, was used for a part of that also. At present, a double line of hot water pipes, two inches in diameter, has also been introduced, and this being below the surface of the path, in front, a more equable temperature is maintained in every part of the house, with less fuel and more heat than before obtained by the furnace alone. The saving is effected by using the smoke and waste heat, to warm the water for the pipes; it is carried twice through a boiler having only three-fourths of an inch of water to be acted on, and answers admirably.

BUDDED vs. SEEDLING PEACHES.

MR. EDITOR: There has been a great deal written on the difference in hardness of budded and seedling peaches, and I am satisfied that a great deal more will have to be written before the question is settled, for the same reason which causes the difficulty of settling all horticultural questions. Four things combine to produce difference of opinion in persons engaged in horticultural pursuits, viz: climate, soil, exposure and treatment; and if every cultivator would honestly put down his experience on any subject, without reference to the opinion of others, we might, perhaps, in the course of time, arrive at something like correct data. But unfortunately most persons become too soon convinced of the correctness of their opinions on these subjects, and are not satisfied unless all others become satisfied,—witness the various preventives of the depredations of the curculio. I have been much amused in reading over the hundreds of articles on that subject. If a man succeeds in saving his plums one season, (which is generally accidental,) by merely looking cross-eyed at his trees once a day, he immediately concludes *that* is the right method, and that every person, who does not follow his plan, does not deserve to have plums; but you seldom hear from that man the following year.

For my part, I have never yet been able to save more than a few specimens, which I effected by sewing a piece of musquito net over a small twig, and being very particular not to let it touch any part of the fruit, for so sure as a plum touches the net, the little rascals will find it out, and lay their eggs from the outside.

Year before last I concluded to save one tree, containing several varieties, from their depredations. I erected two poles on each

side of the tree, from which I suspended a musquito bar, enclosing the whole head, and drawing it together about the body; every week or so, I would open a small hole to take a peep, and was highly delighted to see my tree loaded with fine, healthy, half-grown fruit. I now felt sure that I had outwitted the gentlemen, and began to calculate the cost of the net, how many seasons it would last, and the probable value of the crop. Feeling so well satisfied of my success, I neglected for a few weeks to watch them. On my other trees—some 25 or 30 in number—the fruit was all stung. About the time I thought they would be coloring, I concluded to treat myself to another peep; when lo! and behold! I discovered that the wind had chafed a hole in the lower part of the net, and every plum, without exception, was stung, and consequently I did not get a single taste; the tree must have contained at least half a bushel, and I am strongly of opinion that this plan, properly carried out, would have saved them.

The curculio, however, is not what I started to discuss, but the subject of *seedling vs. budded peaches*, and all I have to state is merely my own experience. I have about two thousand trees, 1,500 budded, and 500 seedlings. Some have been planted eight, some seven, and some six years. The first four years I went to much trouble, in worming, trimming, and cultivating, but all to no purpose; the early and late frosts prevented my having a single peach. Much discouraged I partially discontinued my exertions. On the fifth year I had a slight sprinkle of the most splendid and delicious fruit I ever saw or tasted—about twenty bushels in all, the seedlings bearing rather more than the budded trees, but inferior fruit, of course.

Since then until the year 1850, I have had from 50 to 100 peaches on all my trees, and, if there was any difference, in point of bearing, it was in favor of the budded trees; and although I have fifty varieties, certain kinds appear to be more hardy than others; for instance, Coolidge's Favorite, the Heath Freestone, and the Oldmixon Free. The last year the trees appeared to be about as prolific, one as another—that is, taking the size into consideration, for some of the seedlings were *nothing but peaches*, most of which dried up and did not come to maturity. The rot in the rich grounds was very bad, destroying, certainly, of some varieties one-half. I have about two hundred trees on a

poor side-hill where there was not the least particle of rot, although the fruit was nearly or quite as fine as that growing on the rich soil. I have noticed that the buds were mostly killed in the winter previous to last year, having had a late fall the following season the young wood and buds became well matured, enabling them to withstand the spring frosts. Now if that is really the cause of the last year's crop, we may reasonably look forward to another crop next year, for the fall has been very favorable, the wood is well matured, and there is not a single bud yet killed that I can discover. *Nous verrons.*

T. V. P.

Clermont Co.

THE CURCULIO—PAVEMENTS.

MR. EDITOR: Much has already been written on this subject, and many methods have been devised to prevent, if possible, the puncturing of the plums, nectarines, apricots and other fruits, by this insect. Each theory having more or less believers, there may be some truth in all, but all theorists are wrong, in supposing that universal experience would prove the truth of their plans under dissimilar circumstances. For instance, one asserts that pavements are an effectual remedy, another assures us that they are useless. Having been a close observer of the trees in Mr. Longworth's garden, I know that it has been eminently successful there for many years; in another place it appeared to have no good effect, and was discarded by the proprietor as useless, though to my mind, the cause of failure was very apparent. With Mr. Buchanan, "the Knockings" have been *the remedy*; this, too, I have tried with the best results, but another, less patient or less determined than Mr. B., has failed with this experiment also. Others proclaim the advantages of salt, lime,

fresh manure, etc., etc., and others still, appear to have been unfortunate with a trial of each and all of the plans so loudly recommended.

I have been an interested reader and observer of these discussions and experiments, moreover I have experimented and studied the habits of the insects, thinking that any method of annoying them would increase the chances of saving the fruit. I have syringed the trees with solutions of salt, saltpeter, sulphur, tobacco, etc., and have smoked the trees with tobacco, none of which appear to be fatal, or sufficiently annoying to induce them to take wing, which they seldom do, except in the evening, early in the morning, or upon a dull cloudy day.

They generally ascend the tree by climbing up the stem, this I have observed myself, and one of my neighbors caught a considerable number by means of a simple trap, made of paper, bound about the tree, tied tightly above, and flaring below like an inverted funnel. I hope this experiment may be more

fully tried by others during the next season, as my neighbor has great *faith* in his *plan*.

As the result of my study and observations I have arrived at the following conclusions:—

1st. The Curculio is rather indolent in its habits and seldom inclined to leave the tree upon which it may first chance to alight, so long as it furnishes it with material in which to deposit its eggs, and with shelter from annoyance.

2nd. They retire from the work of destruction for a considerable portion of the day, and take shelter in the loose soil or grass, in the shade beneath the tree.

3d. They can fly when it suits them, and there is no doubt they do migrate by this means from tree to tree, during the night, if needing a fresh field, or if disturbed by too constant annoyance, but they prefer remaining stationary.

4th. They generally ascend the tree by climbing and can seldom be induced to fly during the day, no matter how much they may be disturbed.

5th. A smooth, close pavement around the trees, extending as far as the branches, is, in my opinion, a perfect safeguard against the

attacks of these insects. If we examine into the history of cases where the pavement has failed, we shall find grass and weeds growing up between the bricks or stones, so as to afford plenty of shelter for the insects—such pavements can be only a partial preventive, and I should rather explain the failure by this suggestion than by supposing the insect was endowed with any remarkable instinct or foresight for the preservation of its progeny which should prevent its depositing its eggs in a situation where the fallen fruit would be swept up and carried to the pigs. It does not trouble the trees that are surrounded by clean pavements, because such a surface affords it no shelter when it is inclined to doze. All are aware of the discomfiture which is apparent when, by a sudden jar, the insects are precipitated upon a smooth white sheet spread out to receive them, instead of the grass or earth in which they could so readily hide themselves.

Other means may be devised as preventives, but I believe that *close, smooth pavements* will prove the most effectual.

Yours respectfully, I. C. FERRIS.
Pleasant Ridge.

REPORT OF THE STATE FRUIT COMMITTEE OF KENTUCKY.

THE committee, to whom was assigned the duty of digesting and reporting the information received from correspondents in relation to fruit culture, beg leave to offer the result of their labors to the Kentucky Horticultural Society, and, through that institution, to the Pomological Congress.

The committee remark that a set of inquiries, similar in character to those propounded by the chairman of the general fruit committee of the Pomological Congress, was distributed by circular throughout the State, and the persons addressed were solicited to respond to said inquiries, and they state that although fewer responses have been received than the importance of the subject ought to

have drawn out, yet they are of opinion many facts will in this way have been gathered highly useful to the cultivator.

Location and Aspect of Orchards.—Perhaps nothing would be more serviceable to the inexperienced cultivator than the power of knowing in advance the capabilities of any grounds he might design to appropriate to orchard culture. Inclining strongly to this opinion, the committee have gone somewhat into detail upon facts tending to shed light upon this subject. They are clearly of opinion that, if heretofore there was any doubt upon the subject, the facts now before them warrant the assertion that, other things being equal, the highest grounds are best fitted

for success in orchard culture. Those of great elevation being subjected to such increased cold as keeps vegetation back in spring till the danger from frost passes by; while smaller undulations upon the surface and the higher strata of the hill-sides are supposed to part with less of their surface heat by radiation than the more moist low lands. The committee are in possession of a well-authenticated instance of the effect of absolute height, furnished by a gentleman of high standing and of the most competent ability to form an opinion on such a subject. This gentleman has owned and had cultivated for many years a farm lying within the peach district; his own orchard occupying part of the slopes of hills of no great height, inclining gently toward a river, distant only a few hundred yards. His success has been marked with the uncertainty common to a fickle Western climate—that is, a fruit year and a failure, or perhaps two years of productiveness and three of disappointment in every five. Within five miles of his farm, however, is located a hill six hundred feet high, and which is thereby made visible at his farm. Upon this hill the peach crop has not failed since he first knew it.

In far the greater number of cases, the cultivator has to choose between places varying in height only a few feet; under which circumstances it appears that elevation secures a greater amount of heat, by keeping the surface within the range of moving strata of air and from other causes, than is experienced in the bottoms or depressions.

That they may be the better understood, the committee freely quote from a topographical survey of his orchard grounds executed by one of their correspondents. The gentleman's site occupies the midst of a plain 250 feet above the level of the Ohio valley; its figure is a parallelogram, the long sides running northeast to southwest 100 rods; the short at right angles thereto, in length 75 poles. A valley heads at the eastern short boundary about the middle and runs through the midst of the orchard, crossing the lower or western boundary at a depression of 52 feet below the summit.

The sides of this valley include a large portion of his bearing trees. The map of this survey is marked by horizontal lines at every ten feet depression, counting down-

ward from the summit, so that one sees at a glance how much each tree on the slopes of the valley falls below the summit of the plain. The author of this survey remarks that trees situated near the horizontal line of 30 feet, counting from the summit downward, lost many of their fruit-buds on the lower branches during the winter of 1849-'50, while other trees of the same varieties at higher elevations preserved their fruit-buds unhurt. Again, that, after blooming in the spring, the same trees were more or less affected by frost, as they were below or above said horizontal line of 30 feet—while, moreover, as depression deepened toward the lowest point in the valley the injury from cold increased until not only the fruit-buds were killed in 1849-'50, but also the small branches or spurs themselves on which the buds were growing. Again, the surplus waters falling upon the plain had in time furrowed out a channel which crossed the southern side of the parallelogram running down one slope of the valley into the stream gliding through the center. Trees located in or near this channel, even when above the horizontal level aforesaid of 30 feet, were not secure from injury like others on the same horizontal parallel only a few rods distant. To give an example of general results, he states that the Heath tree on high ground bears this year abundantly; below the line of 30 there is not a fruit, and between the horizontal lines 45 and 50 he has some dozen thrifty trees that have not borne in eight years, although in that time there has been three full crops and two partial ones.

The committee have received no account, written or verbal, differing materially from this, except in accuracy of detail. One gentleman states that his peach orchard inclines gently from either of two opposite sides inwardly, but that the depression at the lowest point does not, he thinks, exceed five feet; yet near this lowest point the fruit-buds were killed last winter and even some trees destroyed by cold. Another correspondent, residing upon the flats of Beargrass, a plain which is unbroken for miles in extent and which would be one great morass but that its lands are so fertile and friable as to filtrate the waters which descend upon its surface, assures the committee that only high lands are suited to orchard culture, and, as proof

of his theory, points to barren trees along the margin of a stream, moving sluggishly along, almost without banks, and without current, while his other trees, a little way off, and not ten feet higher, bear well. Still other correspondents, whose orchards lie upon hill-sides, assert that they can tell in spring where the line of safety ends and that of injury begins, and that they can perceive the gradations of injury grow greater as the hill-sides are descended.

The cause of this injury will doubtless be found to consist either in the greater intensity of cold prevailing in bottoms, or the greater susceptibility to harm on the part of trees located amid the greater moisture always present there. This is an interesting question, and its solution will require many experiments similar in character to those published during the present year by that fast friend of science, Lieutenant Maury, of the Navy. The committee have thought the following experiment, though not conducted with a view to that end, calculated to shed light on this subject. On the 14th and 15th of April, 1850, at night, the mercury in open air, sunk to 26° above zero, and every unprotected open fruit blossom was killed; but at the same time a tree in full bloom, surrounded by artificial heat, with a self-registering night thermometer in its branches, which never sunk lower than 29° , saved all its fruit alive, thus showing the difference between safety and destruction not to exceed 3° . Again, the same observer, the author of the topographical survey, on the 2d of April, 1849, had one thermometer on the high portion of his orchard grounds, and another in the bottom thirty-five feet lower. At 1 A. M., he found the thermometer in the bottom at 28° , and being surprised to see that on the hills 33° , changed their position, but was soon convinced that there was a difference in tempe-

rature between the two points of five degrees, which, on the 14th and 15th of April last, would have been more than a killing difference. An acknowledged ignorance, both of the intrinsic value and time of ripening in respect to many peaches, pears and plums, now in cultivation, forbids any attempt on the part of the committee to offer a list for general cultivation, or to propose a rejected list; and they would further remark that, although the statements herein set forth are more particularly applicable to stone fruit, it is only because their comparatively tender habits render them more frequently a prey to ever existing causes, than the hardier apple and pear. The latter fruits are by no means harm proof.

In regard to preventives against the assault of the curculio upon smooth fruits, the committee feel called on to state a few facts and experiments. Several cultivators have this year tried dusted lime upon Mr. Young's plan; others have tried whitewash. Whitewashing fails to cover the young fruits, and seems to be inefficient, and, for this season, dusted lime has not given the same satisfaction, as for the two previous years. At present the committee are inclined to think failure, (which was only in part) attributable to erroneous impressions as to the stay of the curculio, rather than to any want of virtue in powdered lime. Several experimenters testify to the soundness and beauty of their fruits so long as the limings were kept up, but that the curculio, instead of disappearing at the end of a month, as usual, prolonged its stay, and afterward wholly destroyed some crops and greatly injured many others treated with lime.

All of which is respectfully submitted.

L. YOUNG,

Chairman State Fruit Committee for Kentucky.


EDITORIAL REMARKS.


Agricultural Bureau.

It is understood that when the General Government have done talking about politics, they intend to organize this important department, which deservedly claims a portion of the regards of our rulers. We of the West,

entertain the most exalted expectations of the good results which are to flow from the judicious management of a well organized *agricultural bureau*. We live in a great agricultural region, our most important productions are of this class, we can furnish food for the

world, if need be, and have plenty left for our own consumption. Such a trade is not to be desired, since it is much better that the larger portion of our agricultural products should be consumed by various artisans and manufacturers within our own borders. I do not propose, however, to write an essay upon political economy, which is a topic that is too extensive in its reach and bearings, for my present space; my object is simply to direct the attention of the public to the claims of the West to a representation in this important department of our Government. The *Commissioner* of Agriculture should be selected from this portion of the country, and instead of being a *politician*, he should be familiar with the state of agricultural and horticultural science, among us. I know of no man so well qualified for this place as J. A. KINNICOTT of Northfield, Cooke county, Illinois. He is the *very* man—unknown perhaps in politics, but familiar with the agriculture of our great valley. What think you, Buckeyes, Hoosiers, and Western men generally? Use your influence to have an officer appointed who is acquainted with our interests in this great department, and who will attend to them.

 THOSE POMOLOGICAL REPORTS, over the delay of which the Editor has grieved so much, have not yet come to hand, and he is fearful that some accident must have befallen them, or that they are "locked up at the agricultural bureau and the key lost," or, that the "two secretaries of the State Board are both of them still absent" from Columbus. He did think that the very flattering notices of himself and his work, which were made by the central body, were in earnest; he would think so still, and will be most happy to receive the *earnest* thereof, in the shape of the *documents*; meanwhile, gentle readers, help him to be patient.

 THE REPORT OF THE KENTUCKY COM-

MITTEE, by our esteemed friend L. Young, Chairman, was already public property, and has been reproduced in this number. It is a valuable and interesting paper.

Ohio at the World's Fair.


THIS glorious State is said to have made arrangements for the entry of some thirty articles at the Crystal House! A State of such extent, with so intelligent a population, and furnishing such varied products from her mines, her forests, fertile fields, and busy workshops, will certainly do better than that; there must be some mistake, else how should it be necessary for the State Board of Agriculture to appoint three distinguished members of their own body as delegates to the Convention!

From this part of the State, several articles of manufacture have been forwarded, and also some of the delicious wines of Messrs. Longworth, Corneau, Yeatman and others.

STOVES.

THE powerful article by Mr. Downing, which my friend Burr Oak noticed in a previous number, and which has been deservedly copied into all the newspapers of the country, may have a serious effect upon this important branch of industry which occupies so much capital in our city.

The ingenious Messrs. Resor, ever ready to anticipate the wants of community, have introduced an open and shut Franklin stove that will suit all tastes, and is quite a desideratum. At present the reader is referred to the *Advertiser* for picture and particulars, or if near by, to the stoves themselves, which may be seen at the store No. 25 and 27 Main street. The details may constitute the fiber of another anti-stove article in a future number.

 Thanks to Mr. Downing for his fraternal notice just received.

THE CRYSTAL PALACE;*Or, Glass-House for the World's Fair.*

THE building will be 2100 feet long, 400 broad; the center aisle will be 120 feet broad, or ten feet wider than the conservatory at Chatsworth. The glass and its iron supports comprise the whole structure. The columns are precisely the same throughout the building, and will fit every part. The same may be said of each of the bars, and every piece of glass will be of the same size, namely, four feet long. No numbering or marking will be required, and the whole will be put together like a perfect piece of machinery. The water is brought down by valleys on the roof, and thence down the columns, and it has in no instance further than 12 feet to run, before it is delivered into the valleys or gutters; and the whole is so constructed as to carry the rain outside, and the condensed water inside. The building is entirely divided into broad and narrow compartments, and by tying these together, there is little for the cross ties of the center to carry. The building is entirely divided into 24 places.

In short, everything runs to 24, so that the work is made to square and fit, without any small detail being made to carry out. The number of columns 15 feet long is 6024; there are 8000 gallery bearers, 1245 wrought-iron girders, 45 miles of sash bars, and 1,073,760 feet of glass to cover the whole. The site will occupy upwards of 20 acres of ground, but the available space which may be afforded by galleries, can be extended to about 80 acres, if necessary.—*Gard. Chron.*

When an implement is no longer wanted for the season, lay it carefully aside, but first let it be well cleaned.

From the Louisville Journal.

METEOROLOGICAL OBSERVATIONS.

It is gratifying to the lovers of accurate knowledge to witness with what rapidity the science of meteorology is winning the confidence and favor of the agriculturist. But as the number of co-laborers in the field of exploration is yet quite too limited, I shall perhaps best subserve your wishes by confining my few remarks to details suggestive of the advantages which may be expected to accrue to the arts of husbandry, pomology and hor-

ticulture, by calling in this science to their aid. In horticulture, what may be considered the greatest triumph of the present, if not of any age, is the successful growing in northern Europe of the New Water Lily, a gigantic native of the equator, one single leaf of which measures more square inches than a farmer's dining table, and which said single leaf contains air-ducts and vesicles enough to displace more than twenty gallons of water—thus enabling it to buoy up the weight of a man. But this triumph has been won by a meteorological analysis of the conditions by which this lily is surrounded in its natural habitat, and a copying of the same in its new abode, not even omitting in the waters of its new home, the almost scalding temperature and whirling motion of that leviathan of rivers, the Amazon, in whose broad waters this remarkable plant delights to dwell.

In agriculture there are many plants grown that are exotics, that are introduced either from the North or from the South, and that will mature best as grown in the colder or warmer portions of the growing season; indeed, I think there are very few that fully answer the farmer's wishes, planted without regard to this fitness of season. It is true we cannot now follow all these plants to their native wilds in order to ascertain how much of water and how much of heat best promote their thrift. But by a series of well conducted meteorological observations, and the simultaneous thrift of cultivated plants, nearly the same ends are accomplished. There is no fact plainer than the truth, that this knowledge is desirable. The true inquiry is, do we possess it? I think not, and I will refer to the culture of a single article, both to prove a want of this knowledge, and the agency of meteorology in leading us to truth. The article referred to is the sweet potato. I think in the neighborhood of Louisville a great deal of labor is thrown away, by anticipating the season of planting this esculent, by forcing it into the open air before the mean temperature has risen to summer heat, the plants remaining stationary, or dying, and weeds taking possession of the ground, thus giving occasion for at least one hoeing more than a later transplanting would require. This opinion is founded upon the following facts—that is to say, I have grown the potato for some twenty years, and I think the planting

season may be said to range between the middle and last of May, sometimes a little sooner or later. Once only in that time I have known the sweet potato to do well, if planted in the open air before the first of May. Again, it has been a practice in my family to give the sets in the hotbeds, too small for use at the general planting, to the servants for their patches or family gardens. It has been again and again remarked during this twenty years experience, that these very late plants in the family gardens of the servants have secured a better "*stand*"—a more uniform growth—and, when the cultivation has been good, a yield nearly, if not quite equal to that of the main crop. Again, the summer of 1846 was one of the longest and hottest experienced in this climate, the mean heat from April to October being about 71 deg. This season was too long for the growth of the red sweet potato planted in May, and it was in housing this crop that I was first taught to know that potatoes may be "*frost bitten*" before it is yet cold enough to freeze, or, what is the same thing, acquire that flavor generally supposed to result from the action of frost. I take the following extract from my diary under date of October 11, 1846:—"Cooked on the 9th and 10th two lots of red potatoes, supposed to be over ripe—the root plump, but skin blotched with dark spots; eyes at point decayed—from whence I conclude that a sound sweet potato has all its eyes plump, however little developed, whilst a decaying of the eyes either at the side or end, will impart a bad flavor to the whole tissue." These facts themselves appear to me sufficient to warrant a belief, that the whole of a long summer is not needed for growing this potato, and that, if so, it is false economy of labor to be in too great haste to plant; but a history of this year's crop is to the point and conclusive. The past spring has been cold, dry and backward. No living man, perhaps, has an experience old enough to have seen summer crops so unpromising at any former harvest as they were at the last; sweet potato sets had hardly begun to vegetate at the period they were transplanted in former years, yet, under the growing influence of a temperature, although not remarkably high, yet uniformly so throughout July, August, and part of September, the yield of this crop, brought to perfection in less than ninety

growing days, is considerably above an average in quantity, and of good quality; nor is any part of the result ascribable to increased fertility of soil, the field cultivated being an old potato ground unmanured.

The pomologist, in search of useful facts, will from this science derive no less assistance than the farmer or gardener, and I will close this article by adverting to a single experiment in illustration. In 1840, strongly suspecting intense cold to be one of the causes producing blight among fruit trees, and aware that (in consequence of the power on the part of trees to grow for one season after receiving a death blow in the trunk, or large branches,) the only symptoms capable of pointing to the true harm producing agency, are often obliterated by time before the casual observer suspects the presence of injury. I then determined to invoke the assistance of the unerring instruments of meteorology as sentinels to sound the alarm on every visitation of intensity of heat or of cold, hoping that, if either of these violent powers were the culprit, I should be able to detect him "*flagrante delictu*," or that, by a continued record of facts, the case of his guilt might be made out upon the evidence of circumstances. In Kentucky, the first remarkable spell of intense cold occurring within the last ten years, happened in December, 1846, a month which would have done credit to a New England winter, its mean being 26°, and the thermometer, at one time for the space of forty-eight hours, not rising above 10° above zero; for some days the expansion of trees in the forest produced a continued cracking not unlike the promiscuous firing of small arms.

On the occurrence of a thaw and immediate examination, many peaches were found to have the bark burst throughout the extent of the trunk—the bark on the branches of one or two pear trees was found to give way to the touch, and, out of a lot of sixty hardy young cherry trees, about half were entirely killed, or so injured as to produce death. In a small orchard of plums, measuring six inches in diameter and very thrifty, about half a dozen had the bark entirely separated from the albumen—in most of them the fact not being discernible except by pressure, and, when touched, the bark being found to hang loosely on all sides of the trunk. In two cases, the bark was burst as in the case of the

months in each year from 1841-2 to 1849-50. The years are made to conclude with September, by request of the Patent Office.

There has been a good deal of discussion about the best hours of observation for a correct mean. We instituted hourly observations for two months in order to test those we adopted, to wit: Sun up or just before, 2 P. M., and just after sunset. Without entire confidence that these are the very best periods, still we have much faith that the results are a close approximation to truth.

Yours truly,

L. YOUNG.

Dr. J. A. Warder.

Hartley's Patent Rough Glass.

I have for nearly two years been trying rather extensively Hartley's patent rolled glass, and have watched with considerable interest the various accounts of its successful application which have been noticed in the *Chronicle*. I am satisfied that it only requires to be generally known to be universally adopted in preference to any other kind of glass. I have used squares forty-eight inches long by eighteen inches wide, and find that from the smaller quantity of wood required, the great diminution of labor in making, painting and glazing, that there is an actual saving in price of nearly twenty-five per cent, as compared with a house covered with ordinary crown or sheet glass. Its practical advantages are, however, the most important. The plants being protected from the injurious evaporation of the direct rays of a scorching sun, require one-third less watering; their foliage is of a much deeper and healthier hue, and it has that peculiar crispness to the touch, indicative of a most perfect state of health. I find that under it plants are scarcely drawn at all; in fact, not more than if planted in the open ground and although their flowering is retarded seven or ten days, yet the bloom lasts so much longer in a better state of preservation as to more than counter-balance this little objection. For Camellias and other plants whose leaves are liable to burn, it is invaluable. One strong objection used against it was, that during the winter months it would

lessen the light to a serious extent. I have paid particular attention to this, but do not find it to exist; similar to ground glass, the light is universally diffused all over the house; and although the southern side of a plant may not receive so strong a ray, yet the majority of the leaves receive a much larger portion of light. I have used about two thousand feet of it chiefly in a span-roofed house, seventy feet long; and I am so well satisfied with it that I contemplate fitting up a house forty feet by thirty for specimen plants. In all my pits it is used only on the south side; the only objection I have to it is the appearance outside, which is certainly far from pleasing, but this is one of minor importance.

W. WAILES.

New Castle-upon-the-Tyne.

LEAVES AS MANURE.—Leaves, buds and tender branches are peculiarly rich in the vegetable alkali; besides which they contain other organic elements derived from the soil, enriching its surface, tending to prevent its exhaustion, or when newly applied—that is to other ground—to enrich it more than superficially.

Leaves—and the remark is applicable to the tender branches also—seem destined by nature for the manure of the forest land, and indeed of ground generally wherever trees grow. The roots collect the inorganic elements essential to vegetation from the soil, penetrating deeply and widely; the leaves detain and store up a certain portion of them with other elements derived from the atmosphere, such as are required for their growth; and these returned to the soil with the fall of the leaf, and there undergoing decomposition are ready to be appropriated again, and re-administer to the process of vegetable growth.

Farmer's Herald.

Snow as Manure.

THE most characteristic, most beautiful, and most beneficial occurrence of this period of the year, is the fall of snow. It is not our purpose to dwell upon the beauty of its star-shaped crystals, nor upon its magic influence, over a landscape, but to offer a few notes upon its utility to the gardener. There is now but little doubt that snow really acts as a manure, not merely by killing insects and

converting them into decaying matter, but by actually adding ammonia to the soil. It was an opinion entertained by the earliest philosophers, that snow contained some kind of salt beneficial to plants; and the poet Thomson only repeats their opinion, when he says of wintry weather

"Through the blue serene,
For sight too fine th'ethereal nitre flies.
* * * The frost concealed glebe
Draws in abundant vegetable soul,
And gathers vigor for the coming year."

Liebig, however, by actual experiment has shown that both snow and rain contain ammonia in quantity quite sufficient to be materially beneficial to plants. Snow also acts as a protection from severe cold to the plants which it covers. We have known the tem-

perature of the air, on several following days, to have fallen as low as 28° whilst a thermometer, buried six inches under snow, never, fell during the whole of the same time, lower than 32°. Brocoli plants covered with snow, are never frosted in the neck, however cold the season may be.—*Cottage Gardener.*

Curious Custom.—In the canton Basle in Switzerland, there is a law which compels every married couple to plant six trees immediately after the ceremony, and two more on the birth of every child. They are planted on the commons, frequently on the high road, and the greater part of them being full of trees, are at once both useful and ornamental. The number planted is said to amount to ten thousand annually,

PUBLICATIONS RECEIVED.

AFFLECK'S SOUTHERN RURAL ALMANAC, AND PLANTATION AND GARDEN CHRONICLE, FOR 1831, pp. 132. "*Preciosum quod utile.*" Washington, Adams Co., Miss

This work contains, beside the almanac, a concise calendar of operations for the farm and garden, adapted to southern latitudes, Also much valuable information on rural matters, occupying five pages to each month, embellished with frequent illustrations of insects destructive to vegetation, implements, ornamental trees, etc. After which follows an advertising sheet, in which will be found an extensive collection of fruit trees to be had at the "Southern Nurseries," Washington, Mississippi.

THE REPORT OF THE COMMITTEE who conducted the Fifth Annual Exhibition of the Delaware County Institute, with the Address of Jno. M. Broomall, Esq., delivered at the close of the Exhibition—Chester, Pennsylvania, 1850.

For this pamphlet some unknown friend has laid the editor under an obligation. From it the fact may be gathered, that the Farmers of Delaware County take a deep interest in Horticultural and Rural affairs, and not only the farmers, but their wives and daughters too, are willing to work in the good cause.

The committee furnishing the report, are half of them females, and many of the judges appear to have been of Eve's daughters fair. The Exhibition seems to have been very well sustained, and to have embraced a great variety of articles of every description. The address is chiefly historical, and therefore valuable for future reference—very flattering mention is made, too, of the influence of the Society of Friends, upon the habits and morals of the community.

REPORTS OF THE EXHIBITIONS, Horticultural and Mechanical of Chester County, Pennsylvania—Spring and Fall, 1850,

Have been duly received and manifest a deep interest in our favorite pursuit, existing among the Friendly population of that ancient county, classic too; in the history of our country immortal—in my boyhood the banks of the Brandywine often furnished traces of the deadly strife of former years in fragments of swords, muskets, etc.

THE MICHIGAN FARMER, Detroit, Mich.,

Indicates by its appearance that the Farmers up in the Peninsula, are of the right sort, that is, the reading sort, and the writing sort

too; though Mr. Isham can scarcely boast of so large a list of correspondents as our friend Bateham, of the *OHIO CULTIVATOR*, who, by the by, has again been putting on a new *Head*—and a right pretty one too, the letters of the title being made up of all sorts of fruits, grains and flowers, put together by that ingenious artist, H. P. Gengembre, of Cincinnati.

SOUTHERN AGRICULTURALIST, Nashville, Tennessee, January Number,

Will no doubt contribute to the diffusion of valuable information among the farmers of that State, so blessed with soil and climate that it should be one of the foremost regions in Horticulture. 1st No. received.

THE JOURNAL OF THE NEW YORK AGRICULTURAL SOCIETY, Albany, conducted by the corresponding Secretary of the Board, B. P. Johnston—Monthly,

Contains the doings of that body which controls the great Fairs held in the Empire State, and is a valuable periodical, as it keeps its readers posted up in all the great agricultural movements of the country. The Meteorological tables, furnished each month by J.

H. Salisbury, Chemist of the Society, would alone give these publications great value.

THE VALLEY FARMER, St. Louis, Missouri.

Continues to be filled with interesting matter, among which I am pleased to observe some articles that first saw the light through our window.

REPORT OF THE FOURTH ANNUAL EXHIBITION of the Cuyahoga County Agricultural Society—Cleveland, Ohio.

This is just such a report as should emanate from every county Society in the State—full, complete and neatly printed in pamphlet form. The State board of Agriculture would then have materials of immense value wherewith to construct their Annual Report to the Legislature, and that document would be creditable to our great Agricultural State.

The Editor had not been able to obtain any account of the Lexington Fair of last Fall, until within a few days, when he has received it from H. T. Duncan Esq., of that city, to whom he tenders his thanks. The Report shall be noticed in the next number.

ACKNOWLEDGEMENTS.

MANY kind friends have sent the most flattering notices of this work, and as some of them might not like to be publicly noticed, all must consider that their kind wishes, and encouraging epistles, are most heartily welcomed by the Editor, who, in this undertaking, has little to expect in the way of present emolument or honor, though he works on in full confidence, that the great West will freely support a periodical of this kind, if it can only be brought before them properly; at present, with the very limited means of reaching the multitude which the Editor has at his command, the subscription list is swelling to quite an encouraging length, and if the friends of the enterprise will only be prompt in fur-

nishing their quotas, the expenses can be met; more subscribers, however, will be gladly welcomed, and the moneys thus furnished will render the work more valuable by increasing the means of adding to its usefulness.

To the correspondents who have contributed so large a share of the most useful matter, the readers, as well as the Editor must feel under great obligations—and it is hoped they will continue their efforts, and encourage their friends to do likewise—let none withhold their mite, but rather contribute each atom of information to the common stock, and thus swell the tide of knowledge which is to flow through these pages.

METEOROLOGICAL TABLE.

CINCINNATI, DECEMBER, 1850.

THERMOMETER.

WEATHER.

Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.	RAIN.
1	38	56	fog & var	variable	cloudy	
2	48	62	do	do	rain	.35
3	49	61	variable	clear	clear	
4	37	40	cloudy	rain	rain	.65
5	34	35	do	cloudy	cl'y, snow	.40
6	30	32	do	do	cloudy	
7	28	32	cl'y snow	do	do	
8	12	21	clear	clear	clear	
9	26	34	variable	do	cloudy	
10	24	33	do	do	clear	
11	31	46	clear	do	do	
12	40	49	variable	do	cloudy	
13	28	31	do	do	clear	
14	23	35	clear	cloudy	cloudy	
15	38	40	cloudy	do	do	
16	40	42	* rain	rain,	do	1.45
17	31	39	clear	clear	clear	
18	28	44	clear	do	do	
19	45	49	cloudy	cloudy	cloudy	
20	33	37	do	do	do	
21	31	44	clear	clear	clear	
22	38	39	rain	rain	r'n, snow	2.05
23	29	34	cloudy	cloudy	cloudy	
24	18	30	clear	clear	clear	
25	32	41	cl'y, snow	variable	do	
26	28	38	clear	clear	do	
27	25	40	do	do	do	
28	38	40	cloudy	cloudy	rain	.35
29	28	30	do	do	cloudy	
30	17	26	clear	clear	clear	
31	23	30	snow, var	cloudy	cloudy	

Inches..... 5.25

Dec. 7th, Snow, Inches 1.05

" 25th, " "30

" 31st, " "50

Rain and snow water, Inches..... 7.10

do do do in the year..... 53.49

Snow in the year..... 28.90

Mean depth of rain (and snow water) for 11 years (1840 to 1850 inc.)..... 49.68

Mean temperature of the month..... 35.17

Do do Dec. 1849..... 32.10

Do do do 1848..... 42.14

Do do do 1847..... 35.23

Do do do 1846..... 40.57

Do do do 1845..... 27.55

Do do do 1844..... 40.87

Mean of Dec. in the above 7 years.... 36.23

Clear days in the month..... 9

Variable (cloudy at times)..... 10

Cloudy (sun not visible)..... 12

31

*Max. ante; or maximum in the earlier part of the day.

Clear days in the year..... 143

Variable..... 171

Cloudy..... 51

365

Highest temp. in the year, July 6..... 96°

Lowest do do Feb. 4..... 0

Coldest day, Feb. 4—mean of..... 6

Mean temp. of the year..... 55.87

do do of the last 10 years..... 55.54

Calms 2 days, and more or less on 9 days.

Light winds on a portion of 29 days.

No high winds in the month.

Prevailing wind (as usual) westerly; but all round the compass about half the month.

High winds occurred on portions of 6 days in March and 3 in April; seldom in either of the other months; but nothing that would merit the name of *storm* throughout the year; and no notable changes at the period of the Equinoxes. It is remarkable that this peculiarity of our climate, and likewise the very rare occurrence of high winds, appear to have escaped the observation of all those who have treated the subject of the Meteorology of our midland region.

The mean temperature in all these observations is the medium of max. and min. deg. of the day.

JOHN LEA.

Corrections.

In the first number, page 20, top line, in the article on Landscape Gardening, the word Norchester should read, near Chester.

In the second number, page 70, among the awards of apples, there should have been an item awarding to Robt. Neale \$10 for Display.

Page 121, 3rd number, middle of the outer column, "*pan juice*" should have been *pure juice*.

NOTICE.

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UNIV. OF
CALIFORNIA



Drawn on Stone by H.P. Gengenbre.

THE END



VOL. 1

FEBRUARY, 1851.

No. 5.

THE SO CALLED ADVANCES OF CIVILIZATION.

WE may witness the evidence of these advances on every hand, throughout our country. Many of the progressive steps are in a forward direction and very agreeable to the man of taste and refinement, still, it must be confessed that this is not always the case, but that the progress is sometimes so energetic that it rebounds, or, as it were, turns the corner, and becomes retrogression.

During the early settlement of a wooded country, the great labor incident to clearing off the forests, must have caused the pioneers to look upon the large trees with disfavor—they were in their way, and had to be removed to admit the sunshine to the fields, and to make room for the plow and the harrow of the cultivator. This was a work of immense labor, and as wood was then so little needed, that there was no market, it was necessary to destroy it upon the ground without the compensation, which at a later day accrued from the sale of the timber and firewood. In early times, every field opened to the sunshine, every acre of corn ground rescued from the forest, every tree that was brought down from its haughty eminence and laid low upon the ground, was a step in the march of improvement, an advance in civilization.

While this state of things existed, would it

be reasonable to expect that the people who had had so many battles with the monarchs of the forest, could look upon them with any thing like feelings of affection? Would it be reasonable to expect that the persons who had expended so much labor in achieving a victory over them, a life struggle, should admire a noble tree, how vast soever its proportions, how green soever its foliage? They could only behold another enemy throwing itself across their pathway to improvement, an obstacle which must require days of severe labor to hack and hew down, or which perchance must be met by a more slow and ignoble warfare, by sapping its foundations with the girdling-ax, cutting off all supplies from mother earth, and leaving its withered body to drop its bark and lose its noble branches, one by one, as they yielded to the rude blasts of winter, no longer able to retain their relationship to the trunk; which too, in its turn, after standing for years a monument of the pristine greatness of the forest, must at last succumb to the powers of destruction within itself, and decaying fall prostrate.

At a later period in the civilization and settlement of our country, the growing wants of the people having required the introduction of Steamboats, Rail-roads, and Cities

men soon learned that there was a market for the products of the forests. Trees, which before had only been regarded with disgust, or with dread, in view of the labor required to remove them, now inspired feelings of delighted cupidity—the same eyes could now behold beauty in their tall trunks which appeared to contain the equivalent for dollars, in the shape of keels, gunnels, plates and beams; while the gnarled oaks and cypresses presented crooked knees for ship-building, and the knotty walnuts, in the prospective, charmed the eyes with the beautiful curls of the veneers that *were to be* cut from them. The desire for the dollar then took possession of the pioneer, who thus made great advances in civilization—all these sources of wealth poured in upon him, in addition to the increased productions of his extended acres, and the vastly increased markets for their abundant produce, until at last, his wealth having purchased refinement, and he himself, now living in and through his children, who have had the advantages of education, becomes more thoroughly civilized, and, in some instances, can even enjoy the truly beautiful in nature without requiring the apposition of the *utile* with the *dulce*. Farm joins to farm, extensive tracts of open country stretch out on all sides, with broad fields and good plain houses, set here and there in the midst of the open sunshine of the clearings. Some discover that they have too much of this sunshine, and the work of planting is commenced, in an attempt to restore, in a degree, the forest trees that have been so ruthlessly extirpated, and now some even begin to appreciate and to realize the exquisite beauty of a lone tree which has escaped the ax of the destroyer. This is especially the case near towns, where the arts and taste are most likely to flourish, but here it too often occurs that *the dollar* again interferes with a natural object that is dear to the lover of these beau-

tiful monuments of the past. The mania arises for changing tracts of country into "town lots," and to make them appear more *townish*, the poor straggling trees that had previously escaped, must now yield their places and bow before the Juggernaut car of civilization, and are all swept away. The roads must be made straight and level, so that many a beautiful object is necessarily sacrificed.

It might have been supposed that in our community, professing so much good taste, the refining influence would have produced a more general effect upon the public sentiment of society at large, but, here again, a disappointment meets the observer, who may have witnessed the results passing before us. Who that has ever strolled upon the glorious hills to the east of our city and rested beneath the shade of those fine old trees scattered singly through the pastures, while looking down upon the growing city at his feet, has not blessed the owners for leaving him such a boon? or who that has ever beheld, while passing, and observing from the distance, the charming effect of light and shade produced by their lengthened shadows stretching across the gentle slopes of velvety green turf, will not now grieve to find that the cupidity of man has sacrificed this enjoyment, which was a blessing common to all who chose to appreciate it? Alas! another and the last instance of deliberate and wilful sacrilege of this sort remains to be recorded:—The beautiful Elm tree at the end of the street in Mount Auburn, which every one has admired who passed that way during the last ten years, and which would have continued to be a fertile source of happiness to every passer, for half a century to come, it too has fallen! Besides its intrinsic beauty, it had become a land-mark, by being just upon the line bounding the recent addition to the city—alas, city life has been the death of it! But why or wherefore, does not

appear; since it was not in the way either of the street or of the side-walk, but was between the two, exactly where it should have been, to be of the greatest possible value to shelter the pedestrian, and to cheer with its refreshing shade, those who rode beneath its waving branches. With delight I have year by year watched its early blossoms, its winged fruit, and its umbrageous foliage; and, in the pelting summer shower, have shielded myself from the driving rain by cowering close to its kindly protecting stem. Now, some *civilizer* wants a road opened just from this point, and his land is too valuable to allow of any deviation from the direct course, so as to save this old monarch for the admiring gaze of another generation of mortals! it is gone!

Civilized man is not always so barbarous, especially when some prominent event of history may have attached a fortuitous charm to an object of this kind. This, too, perhaps, is owing to the less hasty advance of civilization in other places. The Treaty tree of Penn, near Philadelphia, was so revered by the people, that it was for many years sustained and fostered by artificial means, and protected in every way, until at length the devouring elements effected its destruction, but not until the results of that unbroken treaty, the ratification of which it had witnessed, had spread far and wide, into a proud State.

At Flushing, Long Island, in the midst of the fertile gardens, there is still preserved, and carefully protected from injury, one of the fine old oaks, beneath the shadow of which the distinguished teacher Fox, when on his religious mission, was wont to preach, in early times, whenever the 'goodlie companie' was too numerous to meet within the hospitable walls of that antique mansion, and home of pure and liberal principles, well known to all antiquarians who visit Flushing.

Hartford is immortalized by its CHARTER OAK, which has for centuries looked down up-

on the fertile valley of the Connecticut, while the descendants of those who secured within its trunk the charter of their liberties, nearly two hundred year ago — still fondly and reverentially look up to it as the custodian of their rights, and extend to it the most assiduous care and attention.

While admiring the wide streets, fine buildings and all the classic objects of Cambridge, with so many things to excite the beholder's admiration for the works of man, presenting themselves abundantly on every side, who could pass unmoved when he met in the midst of one of the broad avenues a magnificent tree, monarch of the way, flinging its branches wide and free—and secured from injury by a handsome iron fence? Who would not feel a respectful admiration, if nothing more, on hearing that the noble object before him, and above him, was the Washington tree, under which the father of his country had encamped with his staff, and where daily prayers were offered for the salvation of their homes by the whole army. Such reflections made the place doubly interesting and excited a reverential feeling, which continues and will continue whenever I behold such a connecting link, between the present and the past—a living memorial of what has been—a silent though eloquent preacher! Long may it stand and be carefully preserved by the pious efforts of those who have so wisely and thoughtfully extended a protecting hand to guard it from injury!

Shall not we too preserve some such living monuments to associate us with the past? Must every connecting link be broken? Oh, fellow country-men and fair daughters of the West, let me appeal to you to exert your influence to preserve some tokens for a future age, some living memorial of the early settlement of our country, in every town and village, to which the eyes of the generations which are to follow us may be directed, as to a witness of the deeds of their ancestors, as to an

evidence of the state of civilization and refinement of sentiment existing among us. Let it not be said of us that we lived in the *Iron Age* of our country, sacrificing every thing to

the hard rules of utility, but that our refinement had reached such a point, that our progress in matters of taste consisted of veritable **ADVANCES OF CIVILIZATION.**

VINEYARD MEMORANDA.

DOCTOR WARNE: I observe in a late number of the *New York Agriculturist*, a letter from Doctor MOSHER. I deem him one of our most intelligent vine culturists, and presume his manuscript is mis-printed. He says, "we have no vineyards that have been established more than twelve or thirteen years." The son-in-law, sons and grandchildren of my earliest vine dresser, Mr. Ammen, are still in my vineyard, and have been there twenty-eight years, or if of younger age, born at the vineyard. The old man, as I have stated, died a few years since of Cholera, refusing all medicine. "I not take any," said the old man, "What I live for? My grapes all rotten, I make no wine." I have several other vineyards, planted a few years after. Dr. Mosher says, "one hundred and fifty bushels of grapes, well assorted, will yield three hundred gallons of wine." I hold that they will yield six hundred gallons. He gives the cost of benching, and trenching, and planting an acre of grapes, at \$300. I had several acres benched, trenched and planted in cuttings, last spring, cost from \$75 to \$85 per acre. Dr. Mosher says, "a south and south eastern exposure is best" Such an exposure in the cool climates of Europe is

important. With our hot sun, a southern exposure is too often too hot. Roots cost much more than cuttings, without a corresponding benefit. I plant two cuttings in each hill, joined at the top and separated at the bottom. If both grow, one of them can be removed without disturbing the roots of the other. I plant the cuttings down to the level of the ground, and cover the tops an inch thick with earth. I should prefer to plant in the fall; if not done in the fall, early in the spring. I plant cuttings for future use, on the north side of the hill, in a stiff, moist soil, and scarcely lose five plants in a hundred. In pruning, our practice demands a change. Our vine dressers, desirous of a large crop, leave too much bearing wood. The consequence is, in worst seasons, that there is not sap enough to ripen the fruit. Again, they follow the European practice of thinning out leaves, and a constant topping of the young shoots. The result is, the shoot cease to grow, the wood ripens, the grapes shrivel and drop. I saw one vineyard below the city, on the south side of the hill, overloaded with grapes, and not a live bunch, owing to these causes.

Yours,

N. LONGWORTH.

KALOSANTHES COCCINEA.

THE *Kalosanthes Coccinea* and varieties, as bedding plants, cannot be excelled either in beauty or the facility with which their cuttings are struck, and brought into a flowering state. The immense and singularly compact head of

bloom that can be obtained from each comparatively small plant, in about nine months from the time the cuttings are put in, combined with their rich color, render them the most attractive plants in the parterre.

We proceed at once to give our mode of cultivating the family for bedding purposes, knowing, from the numerous inquiries made about our mode of treatment, that many of our readers will appreciate any information on the subject, and those who have only seen these plants cultivated in pots for exhibition, will, we are sure, be gratified to learn, that they are equally beautiful when planted out in beds; for when well managed, their fine compact appearance and the size of the flower far surpass individual plants grown in pots. Any time about the end of September we take some strong points of the growing shoots, and after forming them into cuttings 24 inches in length, cutting close to a joint, and stripping the leaves from the bottom for about three-fourths of an inch, we lay them on the potting bench to dry for twenty-four hours. This is necessary, as from the extreme succulence of the plants, they are apt to rot if put in at once.

Shallow pans or boxes four inches deep, and any convenient length and width, are prepared by putting in two inches of drainage, then a little moss or sphagnum, and over that, some lumpy peat or loam an inch deep; and then an inch of sandy loam, fine lime, rubbish and sand, well mixed and pressed closely down.

The cuttings should be put in about an inch or an inch and a half apart, and a slight watering given to settle the soil around them. Place them in any frame or pit, or even in the greenhouse, close to the glass, and they will strike freely and continue rooting all the winter. The tops will not grow much if kept near the glass, and plenty of air allowed to circulate about them; nor is this desirable, as the dwarfer the plants are, the more novel and beautiful they look.

In March prepare some compost for pot-

ting them, by mixing three parts sandy loam, some fine lime rubbish, a very little leaf mold, or lumpy peat and sand. Take the plants from the pans with little balls of soil, by raising them gently with the potting stick, and place them singly in four inch pots, well drained. Set them in a frame or pit, with their tops only four or six inches from the glass, and where the frost can be excluded, keeping the frame close for about a week or ten days, after which they must be gradually inured to a circulation of air. Tilting the sashes at the sides, by placing the tilter between them and the rafter, will be found to answer better than sliding, or only tilting at the back. The object is to give strength without drawing the plants up, and by keeping the glass close to their tops to cause them to set flower-buds, which they will readily do under such treatment; and by planting out time, which with us is about the beginning of June, every plant, if well-managed, will have its head of bloom perfectly formed, and beginning to expand.

Kalosanthes look best planted in circular or oval beds, placing the tallest in the center, and gradually descending to the edge; the last row should be placed in the ground a little deeper than the rest, and should slightly incline outward, in order to give a rounded appearance. Any good border soil seems to suit them, but if poor, some fresh loam and leaf soil should be added. We always water the plants well before turning them out of the pots, and the bed also, when necessary. Some green moss laid upon the surface of the bed, gives it a neat appearance, and prevents evaporation. It will be found that no plant which is so beautiful can be more easily managed; and when in flower, it always attracts more notice than anything else.

Gard. Chron.

THE VINE IN LAWRENCE COUNTY.

Cincinnati, January 9, 1851.

DEAR SIR: As the culture of the vine appears to attract an increased portion of the time and attention of the husbandmen in the southern part of the state, and as there are many new beginners engaging in the culture of this delicious fruit, many are seeking in-

formation in regard to the best mode of cultivation, most congenial soil, sorts best adapted to our soil, and climate, etc.

You will please permit me to submit the following observations and suggestions. I will here remark, that the culture of the grape in my county, as at present understood and

practiced, is somewhat difficult, in consequence of blight and depredations of the Curculio. There are instances, however, of admirable success, with little or no attention, skill or experience, one of which I will state: A friend of mine has a vine (sort unknown, as it was planted long before he came into possession of the premises on which it grows,) which annually produces enormous crops of very sound fruit. The vine is trained upon the wall of his house, with branches extending quite round the same. The vine having produced extraordinary crops for a long succession of years, without having been affected by either of the foregoing pests, and without the application of manure or cultivation, other than moderate pruning, it has very naturally led to the conclusion that the success is altogether attributable to the extraordinary hardihood and productiveness of the variety.

Now, Sir, notwithstanding the above conclusion appears to be universally entertained

by citizens of the town in which the vine grows, I strongly suspect that further investigation and experiments will show that this extraordinary productiveness results from other causes.

On inquiring of the owner whether the vine had received any extraordinary culture, he answered in the negative. He stated that it had never been dug about, watered or manured. I requested him to state the character of the soil upon which it grows, to which he informs me, that a basin or depression had been filled with old logs, rich manure, surface soil, etc., to the depth of several feet, on preparing the building site upon which the house and vine stand. This explanation has very much depreciated the value of the variety in my estimation.

I would be pleased to hear the views of experienced cultivators in regard to this matter.

Respectfully yours,

H. N. GILLET.

From the Cincinnati Horticultural Transactions.

MOSHER ON THE VINE.

As many persons at the present time are about engaging in the cultivation of the Vine and the manufacture of Wine, some of whom it is presumed have very little definite knowledge of the subject, it would be well to pause and enquire—what are the objects which lead so many men into this pursuit?

The thirst for gain, the main spring of American enterprise, is undoubtedly the moving impulse. With some, it may be a more refined motive, a thirst for a pure and wholesome beverage. But, whatever may be the motive, sound discretion would seem to dictate, that before embarking too extensively in the business, it is best "to be sure that we are right, and then go ahead."

An almost infinite diversity of opinions and

theories are afloat in this country in regard to the best mode of planting and managing the vine, as well as in the manufacture of wine. Some are in favor of shallow planting, others would plant deep. Some recommend planting it great distances, with little pruning, thereby favoring, as they say, the natural habits of the vine, which, in its native wilderness often overtops the loftiest trees. Others again, in imitation of European practice, favor close planting and short pruning, with a previous thorough preparation of the ground by trenching or digging it all over, to the depth of two or more feet—all intermediate grades of practice are pursued according to the ability or caprice of the cultivator.

In North Carolina I see it gravely recommended by a distinguished individual, to plant thirty or forty feet apart and allow the vines full latitude to spread themselves, and not to prune at all. Quantity of product and not quality, it is evident, must, in this case, be the desideratum—for it is frankly avowed that in order to make what is termed wine, one fourth part of spirits is added, or three pounds of sugar to each gallon of the juice, and two thousand gallons of this compound are prepared from an acre, and sold from one to four dollars a gallon.

Dr. Weller of Brinkleyville, affirms that our American grapes do not contain a sufficient quantity of saccharine matter to make wine, therefore sugar or spirits in large quantity must be added to prevent the acetous fermentation. This every one might expect from his mode of culture. The same is the case in Italy where the Asiatic vine is generally, allowed to run wild with little or no pruning or care. Their wine, made from such grapes, is scarcely fit to drink at home, and none of it will bear exportation.

Any person who will take the trouble to examine the history of the Vine from its first introduction into Greece by Bacchus, down to the present day, will learn that no wines of superior quality are, or can be produced, unless the greatest attention and nicety are practiced in the cultivation of the crop.

The family of the Vine possesses a striking resemblance to the human race. In a state of nature it is a perfect savage—vagrant and wandering in its propensities and productive of little fruit. As the companion and friend of man, from the earliest periods of his race, when neglected it has neglected him. When cultivated, with the light of science and philosophy, it amply repays with the choicest and most refined nectar.

Although the vines of America are of a different race from those of Europe, or, it may

be, were introduced into this continent by the aboriginal races of man, which they so much resemble, much good ought not to be expected from them until they have become civilized, or I should say more properly, have become domesticated. Before they will yield us the best quality of wine, we must tame them—curtail their rampant habits and growth by proper culture—close planting and short pruning. By doing this we may, in the course of fifty or a hundred years, make them as docile as the Asiatic vine, and produce as luscious a vintage. [Can the Ethiopian change his skin? Ed.]

In this climate, in good localities, it has already been proved, and many respectable persons in this vicinity can attest to the fact, that the Catawba and the Cape grape, when well treated, will yield a pure and perfect dry wine without any admixture of sugar or alcohol whatever, or of any other foreign substance. Within my own knowledge, the pure juice of the Catawba grape has been kept in bottles twelve years, the last six of which, it was kept in a dry chamber, and became so much improved, as to be pronounced by good judges a most delicious dry wine, that would compare favorably with the very best Hook or Madeira. Twenty-four dollars a dozen was offered for it, by one who knew what constituted good wine.

The pure juice of the grape alone, deserves the appellation of wine—to obtain which, of an excellent quality, is the grand desideratum that should engage the enlightened efforts of this society. If sugar or spirits is required to convert the juice of the grape into what is called wine, the sooner the vine culture is abandoned, the better—for we already have among us enough artificial mixtures of this class called wine—many of which I am credibly informed, have never had the christening influence of a single drop of the blood of the vine.

If, in awarding a premium by this society for the best Native Wine of the vintage of 1847, it is intended to apply indiscriminately to all the mixtures of the produce of that year, it is difficult to perceive how Horticulture is to be benefitted by it. It is liberal and praiseworthy to offer rewards that will tend to encourage so important a branch of Horticulture as the Vineyard. To bring its produce into a high state of excellence, and to make public that mode of culture and management of the vine, and that treatment of wine which shall elicit the most meritorious production and obtain the prize. I know the society in offering this reward, were actuated by the purest motives—to encourage horti-

culture improvement alone, and never dreamed of ministering to the cupidity of the most skilful inventors of compounds. That cultivator who manages his vines in the best manner, and thereby produces to this society a pure juice of the best qualities, such as strength, fineness, aroma and flavor should be entitled to the premium, and not he who possesses most knowledge and skill in combining mixtures. It is of incalculable importance to this society, as well as to the community at large, to know how to cultivate the vine and to manage the pure juice so as to produce the best samples of wine, which will always be sure to command the highest market value.

S. MOSHER.

HOW TO MISMANAGE—WATERING—POTTING.

WATERING.—Water is not an uncommon source of profit to the mismanager. It is quite astonishing, indeed, how easily this element may be made to assist in spoiling a garden.

Foolish people say it is a part of the food by which plants exist, and that it requires to be administered with care, skill and discretion. But your geniuses are not to be bamboozled by fine names, or what the world believes to be authority. They know better. How, indeed, can anything be fed on water? Can a man, or a horse, or a sheep? Even a goose on a common, wont live on water, but must have grass. How, then, should a plant? The opinion of the mismanager is decidedly, that water is of no other use, than to moisten the soil, and therefore, he keeps his soil as wet as he can.

He has also his own ways of applying it. When he waters the plants in his borders, he gives them "just a sprinkle," by holding the watering can high, and allowing the drops to dash on the ground, "quite natural like." By repeating this operation once a day, he will by degrees bring the ground to a nice hard surface, so as to keep in the heat and be easily raked. It is true that the hard, hot ground is not favorable to the admission of water, but then it has the advantage of looking well, and besides, if water is poured on it,

somewhere or other it must go, and it will be sure to find its way to the roots, if it does not find its way to the gravel walks, or a neighboring ditch.

In like manner if plants are in pots, they should be deluged overhead from a coarse rosed watering can. When you see the water running out of the hole in the bottom of the pot, you can be under no mistake that plants have had enough. It is true that a good deal of soil and other matters run out of the pot along with the water, but that is of no consequence, there is the more room in the pot for the further supply of water. It is true that little or no water remains in the pot, the ball of earth being too hard to receive it, but that also is of no importance, because it is so easy to water it again.

Some people on the other hand soak their potted plants very gently, and when the ball of earth has taken all it can, they then remove it carefully from the water, but that is troublesome, it takes up a great deal of time, slops a man's legs, and is merely a fancy of folks who pretend to be wiser than their neighbors. Another method to be particularly recommended, is to water trees in the open ground, by pouring down water at the foot of the stem. The man who has a genius knows the advantage of that; water is to moisten roots, the biggest roots are at the foot of the stem,

therefore water should be applied to the foot of the stem. It must be owned that the advantage of the practice is not apparent, unless a heavy storm of rain should fall immediately afterward, but as the reasoning is correct, the practice must be right.

It will be evident that the plans of the mismanager are far more judicious than those of the man who contrives to irrigate his beds by turning a gentle stream over them. If it were only because so much labor is saved by irrigation, such a trench-field way ought never to be adopted. It is just as absurd as that plan of warming water in tanks, artificially heated or exposed to the sun before using it. Who would drink lukewarm, flat water, if he could get it fresh and cold from a deep well, and why should a plant like it? As to warming it by hot pipes, that is about the silliest scheme of the modern pretenders to a knowledge of gardening. A laboring man might as soon think of washing his face and hands in warm water, beside, plants cannot feel. If you ask our friend, the genius, whether he does not think that warm water would agree better than cold with a laborer, in a violent perspiration, or who had been stewing all day in a hothouse? he triumphantly inquires whether a plant is a man? It may be true that tropical plants come from countries where cold water is unknown, perhaps they do, perhaps they don't. At any rate, the mismanager will teach them how to bear it, and it can not be denied, that to harden plants is an object with all real gardeners.

Never have a syringe in your garden.—What is the use of a syringe? It only throws water on leaves, but where is the advantage of moistening leaves? Even if plants did feed on water, they would not feed by their leaves? You might as well put a man's roast beef under his arm, and expect him to fatten by it. Still more repugnant to all the mismanager's ideas, is the foolish habit of syringing the brick walls and paths of a greenhouse. What is the use of that? What good can it do a plant, to throw water on a brick wall not within a yard of it? No, no, keep the footpaths dry and nice to walk upon. Keep the walls dry too; if you do not, they are very likely to be covered with "green," and then you will make things comfortable. If you do employ a syringe, be sure to use it most when vines are in flower,

and afterward when they are in fruit, and in the greenhouse, first when the flowers are opening, and next when the wood is ripening. When they are making their growth it is of no consequence. These rules are highly deserving attention; there can be no doubt, that if they are carefully studied, and the precepts carefully observed, there will be little left to mismanage.

POTTING.—Potting is an operation in which the talents of a mismanager are generally conspicuous. The quality of the implement, its size, and the mode of using it, are each subjects in which he is particularly conversant. In the selection of pots he will always take the softest, because he thinks they suit plants best, that is to say, they become dry sooner than others, are hottest in the sun, coldest in the draught, the most difficult to clean, and by far the most perishable. The latter circumstance is of no consequence, for it increases the potter's bill, and expense is no object with him, as has been already shown. In preparing earth in which potted plants are to grow, the same skill should be conspicuous. Always sift your earth as fine as you can get it, it looks so nicely. Ram it down as tight as you can. That prevents water running off and saves the watering can, if it is rather stiffish so much the better, there will be the sooner a hard ball. When you crock a pot, don't put one large crock over the hole, and a handful more over that. One is quite enough, whether it lies over the hole or on one side, is a trifle, if it does not cover the hole, the earth will, if you only press it down tight enough.

Always keep your plants in small pots, as small as they will grow in, and never shift them if you can help it. By this means you will insure nice little specimens, and you may have four or five times as many sorts in the same space as your neighbor, with his one shift system. Perhaps he will have more flowers and a finer display than you, but what then? You will have a much larger collection; if the plants should happen to die, do not throw them away on any account, but leave them with their sticks in; they will show what a famous collection you have had. The advantage of this may be seen by any one who visits Sir Andrew Aguecheek's houses in the county of York.

There is a foolish fashion of growing what

they call coniferous plants, for out door specimens; if you fall into that fancy, take especial care that your plants remain in the pot long enough to get cork screw roots. This is easily managed by considering well, say for three or four years, where you will put them, and, in the meantime, if you keep them in small pots, standing on cinder ashes, plenty of new, young roots will come out of the bottom of the pots. Some say that cork screwed pine trees are apt to blow over when they are old; if so, that is an additional reason for getting them into such a condition; a pine tree reeling over from the perpendicular is picturesque.

Perhaps you will like to repot a plant; in that case, we advise you, never touch the old ball, let it alone and drop it gently into the new pot, working some nice fine mold all round it. You will see immediately how easily it receives water; the liquid will be through the hole in the bottom almost as soon as it touches the mold. Smith says that it

wont touch the roots, but never mind him. Have not your father and your father's grand father always done as we advise? And how can a man do better than walk in the way of his forefathers? May be you intend to pot strawberries for forcing. If so, mind not to put them into pots till you want to set them going; their roots cannot do better than in the ground. At all events, if you do pot them before hand, it is essential that you should not do it before the end of November. Having done it put them in a corner till you want them. Some people pack them in bracken or leaves, or some material that will shelter them. Do not follow so ignorant an example. Is not a strawberry hardy? What need then can it have of protection? To be sure, the great forcers of strawberries take much pains to shelter their plants till they are wanted, and to prepare them months beforehand; but these are the prejudices of mere practice, and beneath the genius of a mis-manager—*Gard. Chron.*

THE WINE-SCALE, OR HYDROMETER.

THE attention of wine growers has been frequently directed to the importance of using this instrument. Mr. Longworth, who has taken so deep an interest in the cultivation of the vine, has especially urged its use by the vigneron, but Mr. L. Rehfuß was, I believe, the first to introduce the instruments into the country for practical use in this business, and brought them before the notice of the Cincinnati Horticultural Society, to which body he presented one of those which are used in Germany, having the impress of the society for the improvement of wine culture, the *Wein Bau Verbesserung's Gesellschaft, Stuttgart*.

The value of these instruments has been questioned by some persons, but it will soon be found that wine dealers will not purchase without using them as a test of the amount of alcohol contained. In trade, the hydrometer is well known to be the best test for the amount of alcohol in wines, or mixed spirituous liquids, and though there be some sources

of error, the results of experiments with this instrument may safely be taken as approximately, if not absolutely accurate. But though the wine scale is a very useful instrument for estimating the amount of alcohol, its great use to the wine maker, is its capability of informing him also of the strength of his must, or fresh juice, showing him the amount of sugar it contains, and enabling him to make up deficiencies by adding cane sugar, if necessary. This being known, he can calculate with certainty upon the probable result of the fermentation, which process consists in changing the sugar into alcohol; if, at the end of a few months his wine, which has appeared to contain much sugar, should be found to be weak, or poor in alcohol, he may rest assured that he has not managed it well; he will, of course, look into the matter, endeavor to detect the errors, and reform his methods so as to do better next time.

It may appear strange to some, that this lit-

the instrument can be used to weigh the sugar, which makes the grape juice heavy, and at the same time enable us to detect, by weighing, the amount of alcohol, which makes the wine light. A few words of explanation will solve the mystery. Water, pure distilled water, is taken as the standard. The instrument is so made, with a ball filled with air, and a counterpoise, or weight attached to the under side, that it will float in pure water, and the stem will project above the surface, the ball being beneath. The water line will be found marked 0. Now, sugar added to water makes it heavier, and if the instrument be plunged into grape juice, or any mixture of sugar and water, it will be buoyed up so, that the ball will be partly out of the liquid. It then becomes necessary to add weights which are placed on the top of the stem, and the number of weights required to bring the apparatus into its former position, with 0 at the surface, will give us the weight of the *must*, and we thus know what are its properties as to richness or sweetness, and can make up the deficiencies, if any exist.

If we wish to ascertain the amount of alcohol in any wine or spirituous mixture, which being lighter than water, will sustain the instrument, we shall find that it sinks more or less, and when it has settled, note the figure, which shows us how much lighter it is than water, and the proportion of alcohol. The juice of the grape, or *must*, should weigh at least eighty degrees, to produce a good wine without any admixture of sugar or brandy.

I do not think that the amount of salts and other matters contained in our wines will ever be a serious obstacle in the way of obtaining approximate results in the weighing of them to ascertain their strength; the *unchanged* sugar presents a much more serious difficulty. Some wines have been found to weigh nothing by either scale, the weight of the sugar counterbalancing the lightness of

the alcohol, a sample was weighed in my presence last night, which contained so much sugar, that, though a very strong wine, it required 24 wts. to bring the scale to the zero point. Now, here the instrument fails to give any account of the quantity of alcohol contained; this was the famous Scuppernong from North Carolina, more than fifteen years old, said to have 3 lbs. of sugar to a gallon.

I am now engaged with my friend C. A. SMITH, pharmacist, in the investigation of the Hydrometric measures in use here, and shall publish the results of our labors in a future number.

The following communication was read to the Cincinnati Horticultural Society, and referred to L. REHFUSS, who returned it with the report that follows.

January 4, 1851.

GENTLEMEN:—

I have read every thing concerning the culture of the vine and manufacture of wine with the deepest interest, and admire the sound views which govern your deliberations. Frequently have I intended to address you some remarks upon the subject, but my ignorance of your language has prevented me from so doing. Excuse me now for imparting some information which I possess respecting these matters.

In reading the report of your society in to-days newspaper, I find that you use an instrument to ascertain the alcoholic strength of the wines. On this point I must differ from you, for no instrument in the world can give a correct result; because the wine after fermentation, contains alcohol, tartar, and other salts, which are not always mixed in the same proportion in each wine. But it might happen that you should examine two specimens of wine, both of which might have the same amount of alcohol, but different quantities of tartar, the instrument would not, of course, indicate the same degree.

Allow me to assure you that men of the finest talents have deceived themselves in the same way, for in the year 1810, the French Government issued a patent for an *areometer* which was said to be so constructed that it should enable the observer to detect the precise amount of *brandy* contained in any sample of wine in which it was placed. The *directions* prescribed the introduction of a quantity of carbonate of lime or chalk, to form an insoluble salt with the tartaric acid, so that there should be nothing left but the brandy, the water, and some *extractive* and coloring matter, these last were said to add nothing appreciable to the weight or density of the liquid, and therefore the instrument would indicate the true proportion of spirit.

Such reasoning could only be advanced by a man who had no experience, and it could not stand the test of sound argument.

The wine does indeed become lighter after the addition of the chalk, and the instrument will sink deeper into it than before. It is well known to chemists that on the addition of lime to a solution of tartar or bi-tartrate of potassa, the lime combines only with the excess of acid, in the *tartar*, while the potash retains a sufficient amount of the acid to form with it the neutral salt. Moreover, we have sulphate of potash and muriate of soda in most wines, and so it is apparent that the addition of chalk will not remove all the saline matters that increase the specific gravity of the wines.

If, then, we cannot by chemical means remove all the saline matters from the wine, so as to ascertain the proportion of alcohol by weighing, we surely can not thus determine the question when the wine is in its natural state, and I do not hesitate to affirm that a true result can only be attained by distillation.

Should I be in the city next year, and you wish me to ascertain the quantity of alcohol

in any wines, I will take pleasure in so doing, as I have already made many experiments in this process, not only in the wines of this country, but also those of Champagne, and have accurate notes, which will serve as points of comparison.

I do not offer you my services for this year because my time is not my own.

Receive, Gentlemen, the respectful regards of your devoted servant,

FOURNIER, Manufacturer
of sparkling wines for N. Longworth, Esq.

To the President of the Cincinnati Horticultural Society.

CINCINNATI Jan. 11, 1851.

IN returning the communication which has been referred to me, I concur fully with the views of Mr. Fournier, that no instrument in use, for ascertaining the alcoholic strength of the wine, can give an absolutely correct result.

My communication of the 10th March, 1849, (which I present again,) sets forth the same facts to you. Therein I explained the use of the wine scales, the composition of must and wine, and I then particularly, though orally, *explained* to the society, the *approximating* properties of the instrument with directions for using the wine scale. In the wine from Missouri, to which Mr. Fournier refers, it was not our intent to find the exact quantity of alcohol, but merely to see the difference between our wine and that from Missouri, on a comparison.

The Missouri wine indicated five degrees, and some of our own, seven. By finding such a difference, it is easy to infer that the wine, which weighed the highest, must contain a great deal more alcohol, particularly as the salts contained in wine are less soluble in it in proportion to its amount of alcohol.

It is an established fact, that liquids will dissolve and retain a certain definite proportion of a salt, at a given temperature, and no

more. Therefore the suggestion in the communication of Mr. Fournier, that two wines of the same alcoholic strength, may have different quantities of tartar salts is very doubtful.

Wine growers, in using the wine scale, should always bear in mind, that it is not the *specific gravity* before or after the fermentation, which gives value to the wine, but it is the bouquet, or good flavor, that gives the character to it, of which the *tongue* is the best judge.

Respectfully,

L. REHFUSS.

CINCINNATI, March 10th, 1849.

Mr. BUCHANAN, *President of the*

Cincinnati Horticultural Society:

I take pleasure in presenting to the Cincinnati Horticultural Society, a specimen of the wine-scale, which is at present most in use in Germany.

The object in presenting this to the society, is, particularly, (should it meet their approbation,) to recommend it to the wine cultivator, as superior to any in use here, made on different principles.

This scale can be used for must and fermented wine. The must should be strained and weighed before fermentation commences.

Manner of using it for Must.—Sink the scale in the must; care should be taken that no air bubbles adhere to it; (this can be done by twirling the scale,) then add sufficient weight to the top of the scale, until it sinks down to 0, at a temperature of 14 Reaumer, or 64 Fahrenheit.

Explanation.—Sweet must, or unfermented wine, is a liquid heavier than water, because it holds in solution, sugar, salts, vegetable acids, etc.; now the more the must contains of these articles, the more weight it will require to sink the scale to 0. For example, we take water as 1.000, and weigh two kinds

of must; No. 1 takes 70 of these weights and No. 2 takes 90. The specific gravity of No. 1 will be water 1.000, plus 70, (sugar) = specific gravity, 1.070, and of No. 2, 1.000 plus 90 = 1.090, therefore, the must of No. 2 is 20 degrees stronger than No. 1, and will give so much the better wine.

In order to use the scale for fermented wines, you have at the temperature of 64° Fahrenheit, only to observe how deep the scale will sink down in the wine; the number to which it sinks on the scale gives the grades of the wine; but the same precautions above mentioned are to be observed. Care should be taken to dip the scale deeper in the wine, several times before you mark the degrees.

Explanation.—Wine is fermented must. The greatest part of its sugar has, by fermentation, been converted into alcohol, therefore the more sugar the must contained, the more alcohol will be thus formed, and the wine will be proportionably lighter than the water. It follows, then, the stronger the wine the deeper the wine-scale will sink, and thus show a higher degree of alcoholization.

Let us take, for example, the same wines we weighed above in the must. No. 1 show now after fermentation five degrees, and No. 2 eight degrees, on the wine scale, and say by No. 1, 1.000 water, minus 5 alcohol = 0.995 spec. grav., whilst No. 2. has 1.000, minus 8 = 0.992 for its specific gravity. A great many believe that the wine scale is of no use whatever. Permit me to show a few of its advantages.

It is an established fact, that a must of a specific gravity of 1.060 or less, gives an ordinary wine; up to 1.070, a medium; and if of a specific gravity of 1.080, or higher, it will always yield a superior wine.

In must of a specific gravity from 1.060 to 1.070, nearly all its sugar will be decomposed

by the first fermentation, and give a wine of short durability. With a specific gravity of 1.075, the sugar is not all decomposed; a little is retained as such, and gives the wine its pleasant, sweet taste. With a specific gravity of 1.085 to 1.095, a great deal more sugar is retained in the wine after the first fermentation, of which every year, at the time of the slow fermentation, more is decomposed and converted into alcohol, which gives to the wine strength and durability, provided it is kept in good vessels, good cellars, and under proper treatment.

Now as the must from our Catawba of 1848, if made from *ripe grapes*, has shown a specific gravity of 1.090 to 1.095 and as the writer of this article had must even at 1.102 specific gravity, we are certain that a wine can be raised here, that will compare favorably in strength and durability with any other, and on account of its high flavor, if the grapes have been perfectly ripe, we are sure that it will find a great number of admirers.

Another example: if at an exhibition of wines we have two samples presented, the specific gravity of both of which has been 1.090 when weighed in the must, and after fermentation, one shows a specific gravity of 0.992, and the other only 0.995. Now by questioning the cultivators of this wine upon their method of treatment, you may easily correct the one who did not properly treat his wine.

So much for the scales, which have so far proved, by the specific gravity indicated by our must, that this country is well adapted to raising wine. We see the time coming when the importation of wines and liquors will decrease every year, and our coffee house keepers will present, instead of intoxicating brandy, whisky, etc., a wholesome, pure, native wine; and that this wine will do more towards temperance, than all the societies instituted for its promotion.

Most respectfully,

L. RICHMOND.

PEARS—ROOT-PRUNING.

MUCH as the cultivation of the pear and other fruit-trees has been improved, by grafting upon suitable stocks, with a view to make them bear sooner, and also by root-pruning in November, so strongly and clearly described by Mr. Rivers, in his "Miniature Fruit Garden," yet, in some soils and situations, they grow so late in the autumn, and ripen their wood so imperfectly, that mere winter pruning and summer stopping are not sufficient of themselves to effect the desired end. This over luxuriant habit of growth is mainly induced by stimulating the soil, aided by the mulching generally applied as soon as the young trees are planted after coming from the nursery. So well have pears in particular been managed of late years, by some of those who have made it their business and study to provide the public with the best kinds on the most suitable stocks, that we not unfrequently see them come from the nurseries in the most perfect condition, being

handsome miniature trees, with numerous short-jointed shoots, covered with beautiful well matured buds, ready to burst into bloom, while the warmth of spring is hardly yet perceptible. This is partly the result of frequent root-pruning and removal, with the view of inducing fruitfulness, and fruitful they are, for we have had no fewer than a dozen fine pears upon a small tree the first year after planting. But it is a question whether cutting the roots in winter is the safest time for the operation; for if much rain happens to fall, and the soil becomes soddened, the newly-cut parts may, and often do, suffer injury. The practice of cutting the roots yearly while the tree is young, and before it has attained the size desired by the owner, tends, on the one hand, to cripple its energies, and make it old while it is yet young, while the extremely fruitful habit of the trees as 'now set out, is not compatible with that quick growth which we all like to see in trees

intended to be trained to a particular form and size, and kept to that, when it is once attained, by judicious root-pruning.

The new owners are of course delighted on receiving such trees from the nursery, and are soon busy in placing them in their stations in the garden. The trees are planted, staked, and mulched, and in dry weather, during the first spring, well-watered. All this is perfectly right; for although the young trees are interesting to look at in their dwarf state, most people prefer having them of a larger size as soon as possible, and trained into a handsome pyramidal, from four to six feet high, well furnished with shoots from the base to the top, or it may be, into a cylindrical, or an umbrella shape, according to fancy. In order to cause them to attain the form and size desired in the shortest possible time, good soil, and careful management as to mulching and watering, with frequent stopping and training for a few years, are indispensable. But during this time the plants in most soils lose that short-jointed and fruitful habit which the skillful nurseryman had been at such pains to give them, and acquire what may be termed a rampant habit of growth, notwithstanding that the depth of the soil in which they are planted has been limited to a foot or ten inches, and rests upon an impervious bottom of rubble and concrete, to prevent their roots from going too deep.

Now, as rapid growth and a fruitful habit can not exist at the same time, the great matter is to be enabled to grow the tree into the form and size desired in the shortest space of time, and then, in one season, to bring it into a fruitful state. The former of these objects can easily be obtained in the manner mentioned above; and the latter, which is the more important, would, we presume, be a desideratum to many of our readers, who, like ourselves, would prefer seeing trees covering their allotted spaces quickly, and without having more fruit than chance or good seasons might produce while this is going on, and afterward to be enabled to ensure plenty of fruit buds for the ensuing season.

To many it will be a startling assertion, but it is true, that the best time for root-pruning fruit trees, with a view to make them ripen their wood well, and set plenty of fruit buds, is in July or early in August, or in forward situations, as soon as they have formed their

first growth; for many trees make a second shoot, or what is termed a midsummer growth, among which are the apple and pear; although vigorous young trees sometimes continue to grow throughout the season, until their progress is arrested by cold on the approach of winter. Than this latter state, nothing can be more unfavorable to the production of fruit, and to remedy it quickly, summer root-pruning is a certain means, as the moment the operation is performed all growth is checked, and the perfect elaboration of the sap in the tree commences. This principle applies to all fruit trees, whether trained on walls, or kept as standards that are unfruitful or in too gross a state. It also accords beautifully with the system of summer pruning and stopping, as a proper balance is preserved by it between root and branch. The natural tendency of an overgrown tree, after being stopped, to throw out a forest of laterals, is also prevented. The excessive flow of sap in the tree is checked at the warmest period of the year, and any fresh accession of crude juices from the root, being in a great measure stopped by the root-pruning, the sap already in the tree, through being acted upon by the heats of autumn, becomes perfectly elaborated, and fruitfulness is the result. I have never seen a tree so treated, that has not been covered with fruit buds in the autumn, and when a favorable spring follows, an abundant crop has invariably been obtained; while, by November pruning, the grossness of the following season only is checked, and in the summer which intervenes between the period of root-pruning, and the time when the fruit may be expected, the trees not unfrequently recover their over-luxuriance, especially in rich soil, or moist situations. As a matter of course, this process is unnecessary with trees in a bearing state, but those with only a partial crop, and which are growing too freely, may be moderately root-pruned without danger of the root suffering, taking care not to neglect giving a good soaking of water immediately after the operation.

It is certainly a great triumph in the art of gardening, to be able to bring pear and apple trees into a bearing state while they are young, and only two or three feet in height, and it also affords satisfaction to purchasers to ascertain, (often in the first year after planting,) if the trees they are to be at some

pains with, are the kinds they wished for; but in order to give them a stronger constitution than trees can have which are constantly kept in a dwarf state, we are of opinion, that it will be found better to allow them to grow pretty freely for a few years after they are planted in their permanent situations, and then summer root-prune them. We confess we often envy the position of those who are situated where fruit trees ripen their wood, and bear with scarcely any assistance in the way of root-pruning. In such situations the grower has only to order his trees already in a bearing state, as supplied by our leading nurserymen, and he will secure plenty of the finest fruit from the season in which they are planted, instead of having as formerly to wait for years. Some trees planted by ourselves in February, 1849, have this year made shoots from three to four feet in length, and some pyramidal trellises five feet high and three feet wide at the base, are becoming pretty well covered with wood. These trees we shall root-prune in a few days, commencing by opening a trench round them about two feet from the stem, down to the hard platform below, and all the roots that are inclined to be strong, will be cut back to within eighteen inches of the stem, but few, except the stronger leading roots, will have advanced so far out at present, and by shortening these, the vigor of the trees will be arrested, and some fruit buds will be formed in the present autumn. Some pear trees, grafted on pear stocks, covering an arched trellis sixty yards long, six feet wide, and nine feet high, were root-pruned for the first time, in July, 1848, when the trees, which had been planted five years in a strong soil, were exceedingly gross. The result of this was, that in 1849 we had a plentiful crop of fruit on every tree, although previous to this, scarcely a pear was attainable. Numerous other instances of success with pears, apples, peaches and apricots, could be mentioned, but it is scarcely necessary.

The only difficulty which amateurs are likely to find in applying this system of root-pruning, will be in determining the distance from the stem at which the trench should be made, and it is not easy to give precise directions on this point. Trees that have only been planted two, three or four years, may, with safety, be cut to within two or three

feet of the stem, proportioning the distance to the size which they have attained. The roots of these may, with frequent pruning, be kept within a comparatively small space, by beginning with them the second or third year after planting, and at every successive operation, going three or four inches further from the stem, and adding some fresh loamy soil; but trees that have been long established, and have not been root-pruned, should not be cut too closely. Apricots and peaches may be kept in a fine bearing state, by root-pruning in the summer when they have no crop, and early in the autumn when they have a crop, but are still too gross. We operate upon wall trees in this condition as soon as the fruit is gathered, and the wood ripens admirably.

It will be well to add, by way of conclusion, that after pruning or shortening the strong roots, which are the cause of unfruitfulness, we put some decayed turf, or fresh loamy soil against them, in order that they may strike freely into it, which they immediately do, as the season of growth is at its height. The food supplied by the new roots during the autumn, will have nothing crude in it, but will supply sap of a kind calculated to form fruit buds. In soils where the pear bears well naturally, without all this labor, it will be superfluous to meddle with it, but hundreds will be glad to avail themselves of a simple, quick and certain means of insuring fruit buds in a month or two, where there was before nothing but masses of watery, fruitless shoots.

F.

Gard. Chron.

CRANBERRIES.—The cranberry crop is undoubtedly short, and from the whole Upper Mississippi country not to exceed 300 barrels will be exported this year. The growth in many sections is a total failure. Last season, or during 1849, over 3000 barrels were shipped from Wisconsin and Minnesota. The fruit is now worth \$8 to \$10 per barrel at St. Pauls, and the Anthony Wayne brought down the last lot that will be shipped in all probability from that port this season.—*St. Louis Intelligencer.*

MINT DROPS.—A time for everything, and everything in its time. A name for everything, and everything true to its name.

ADDITIONAL NOTES ON VINERIES.

DEAR SIR: In your last number I notice Mr. Rice, in his excellent article, has given us some plain, practical hints on the cultivation of Foreign Grapes under glass; he has, however, omitted a few particulars which should have been introduced in order to render the instructions to beginners, as clear and efficient as possible. I will endeavor to supply the omission.

In the first place, from my experience, the front wall of the vinery should not be more than five feet high—four and a half would do—and the glass of the front sash should extend down within one foot of the border, so as to get the sunshine inside of the house, as near the front as possible.

In planting, Mr. R. says, the vines should be placed "at least one foot from the front wall," but whether inside or outside he does not say; some plant in the house and others outside and draw the vines through the arches. I will state the manner in which I planted. I placed the vine under the arch, and as the opening to the inside border is twenty inches wide and extending from six inches *above* the surface of the border to the bottom, the roots go inside or outside, as they please. In winter, a small board is placed against the arch outside, and is covered with litter to protect the vines from frost.

In excavating, preparatory to making the border, (if the whole space *inside* and *outside* can be so called) I gave the bottom an inclination outward of one foot in twenty six, (the width of house and border,) before the drainage was placed, so that the superabundant moisture runs through the arches or spaces, and the whole is properly drained.

It is better to prevent mildew than to check it after its appearance, and the best way is to dust the floor of the vinery freely, about the 1st of July and the 1st of August,

with sulphur. This is done by scattering with the hand in the middle of the day, when the sun is on the house. It is very easy for those having experience, to vary the treatment according to circumstances, but there is one direction I have not seen in the books, and that Mr. Rice has omitted. Last spring, with my first crop, I experienced the difficulty, and as none could answer my questions satisfactorily, I name it here; it is, *when to stop the fruit bearing spur?* all the directions say, "when the fruit has set." I understand that to mean, *after* blossoming; but in my house nearly all the spurs would have grown ten feet *before* blossoming. It seemed contrary to sense to let them grow at such a rate, and then cut back to two eyes beyond the bunch, so I took the responsibility of cutting back after they had grown about three feet, and at the same time, cut off all but two of the best looking bunches of blossom buds on each spur, and after the fruit was set, I cut off the worst, leaving but one. I was told by an old grape grower that it would ruin the bunches, but such was not the result.

In trimming the laterals, I have found it best to cut every week, as the growth is exceedingly rapid in this latitude.

In the second swelling, as the fruit begins to ripen, it is best to syringe the floor of the vinery in the middle of the day and in the evening, keeping the atmosphere damp until the fruit is nearly colored.

The best plan for a walk is a pathway made of slats, nailed upon cross-pieces, for the border becomes very hard under boards. I had no occasion to mulch the inside border, but think it would be an advantage in this climate. The outside border was mulched from about the middle of July to the middle of September.

These minute details (*that every body*

knows) may seem unnecessary to old hands at the business, but they are the most important to a beginner, and I trust they will therefore be excused.

I have already taken up more space than I intended, but in conclusion would recommend

those who are about erecting vineries, to plant nothing in the house but grapes. I tried peaches, plums, figs, etc., but have thrown every thing away but the grapes, which, with a little trouble and care, will abundantly reward the amateur.

W. R.

From the Gardeners' Chronicle.

VAN HOUTTE'S NURSERY.

THE Nursery of Van Houtte is a short distance from the town, and as time was precious, I drove to allow as much as possible, to this far-famed collection. The ground skirts the road for a good distance, the entrance being at the extremity furthest from the town, the reason for which I could not divine. A high hedge of hornbeam protected hundreds of Camellias and New Holland plants, and prepared me for the sight of almost a town of glass houses. On my arrival, I noted the little attention that had been paid to the culture of specimen trees of hardy kinds, and the utter neglect of any attempt at what we call landscape gardening. All here was hard, mechanical and business like. It looked a manufactory for plants, as such indeed it is, and something more. I took a rapid glance over the herbaceous department, which is large, and contained some plants not usually cultivated with us, especially some Composites. The *Alstroemerias* were nearly out of blossom; they had been growing under glass, and the lights taken off as the plants had advanced. In this manner many bulbs are grown in this establishment. I had here the opportunity of seeing beds of *Gladiolus gandavensis* in full flower; they differ slightly from each other, as has been well given in Paxton's plate, but none of them were at all comparable with *G. Breuchleyensis*, which is a far superior flower, being at once of a higher as well as more pure and transparent color. I had left it in blossom at home only a few days before, and could not be mistaken. Both hybrids have *G. natalensis* for one parent, but however this may be, one thing is certain, namely, that we have no border flower to rival *G. Breuchleyensis*—it is peerless.

After Groom's Lilies, or even my own, I

could but feel that those I saw were not particularly well grown, but then it is not made a point of here, and there is quite enough well done to allow the truth to be told without offense. In fact, as plants go in this establishment, the very great merit is in the hothouses. We have here collections of Palms and tree Ferns, of herbaceous Ferns and Tillandsias, etc., of dimensions we only expect to find at botanic gardens or our own Loddiges. These are in fine health in one house, placed so thinly that the form of each was shown, while in another that delightful intricacy of tropical forms is produced by growing them closely together with twining creepers and dependent orchids, the extensive use of *Lycopodium*, both on the borders and in pots, gave a freshness and coolness to the whole. A *Cycas revoluta* with a stem twelve feet high, and dividing into four branches, with their leaves, gave a very extraordinary character to one of the houses. The houses are generally narrow, and some of them of extreme length; the longest appeared upward of three hundred feet, and with a path so narrow that one person only could pass down at the same time, but arrangements were made to pass each other at intervals, there being side niches in which one person might stand while another continued on his way unimpeded. This long house was entirely filled with stove plants. Nearly all the structures are low, and at their entrance you have to descend some two or three steps. In one house I observed nothing but gloxinias, which were admirably grown. In this family Mr. Van Houtte seems to take particular interest, for here were seedlings and crossings almost without end; and among them were some very beautiful new varieties.

A house has just been erected for the growth of *Victoria regia*. It is circular, the outer walls about five feet, upon which rests a curbing of stone, which receives the iron sash bars—for rafters there are none—these ascending at a low angle, and united by a circular collar of iron, upon which is supported the only means of ventilation. The tank is three and a half feet high and the young specimens appear very happy in an atmosphere of 95° Fahr. But the most remarkable part of this establishment and one that separates it entirely from all rivalry, is the manufacture of coke and gas for the buildings. What gas could be required for in such quantity, at first puzzled me; but when I saw a whole range of buildings capable of holding one hun-

dred and fifty persons at their desks, I ceased to marvel. It is here that artists paint the flowers from nature; these are copied for form and shadow upon stone, and struck off upon paper; each separate outline then is passed to youths to color as nearly as they can to the original—the artist who first formed the design superintending them. I believe we have no such artistic work shops at any nursery in England.

I returned as highly gratified with the place as with Mr. Van Houtte's politeness, and would recommend all lovers of gardening traveling in Belgium, to spare a few hours to its inspection.

WILLIAM MASTERS.

RUST ON APPLE LEAVES.

I observed, early in May, 1849, that several varieties of apples in my old orchard presented the appearance of bad health; the leaves when quite small began to turn brown and shrivel very much as though they had been scorched by fire. On examination, I found they were affected with rust—the entire surface of many being quite covered, others partially covered or speckled, the rust striking quite through the leaf and killing just so much of it perfectly dead, as presented the slightest appearance of rust on the surface.

The natural consequence of this destruction of foliage, was a perfect stagnation of sap; the branches ceased to grow, and the fruit remained *in statu quo* for months, until the terminal buds of the leading branches made a forced effort, and pushed forth a tuft of new leaves. By this time all of the first set of leaves (except a few fragments) were off. As the young leaves on the terminal branches and an occasional water-sprout from the trunk or large branches, made their appearance, the fruit took a second growth. Rambos got to be as large as Siberian Crabs, and Rome Beauties as large as small Romanites, etc.

I supposed it was the effect of the severe frost which occurred about the time the apples were in bloom and the young leaves just beginning to develop themselves. There was one thing however for which I could not account—where several sorts were growing on one tree, one would be completely destitute of foliage, and others remain fresh and healthy.

This year the same sorts have been affected in the same manner, and to a greater extent. One Rambo, after making a faint effort to leaf out, died entirely; two others were only saved by having a branch or two each, grafted with other sorts, which remained quite free from rust and grew rapidly all summer, furnishing a small but healthy supply of foliage to elaborate sap from the stem and roots of the tree. The fruit now, (Nov. 7th) on the Rambo is the size of cherries, while a branch each, of Cathead and Jamison, produced fruit as large and fine as ever on the same tree. The rust has struck some half dozen sorts in my old orchard, among which, however, several young trees suffered quite as bad as any of the old ones; but I find not the slightest appearance of the disease in my four other

orchards which contain near one thousand trees, and embrace some three hundred kinds, among which are the same sorts as those affected in the old orchard.

Now sir, can you, or any of your numerous readers or correspondents assign the true

cause of, and give a preventive for the disease? If so, I shall be much obliged for the favor.

Yours truly,

H. N. GILLET.

Quakerbottom, Lawrence co., Ohio.

PLANTS AND GARDENS OF THE ENGLISH AT SHANGHAE, IN CHINA.

THE gardens of the English residents in Shanghai far excel those of the Chinese, in the number of species of trees and shrubs they contain, and also in the neat and tasteful manner in which they are laid out and arranged.

In 1845 only one or two small English houses had been built, and no gardens had been formed, but now a large English town has risen on the banks of the river, and almost every house is surrounded by a garden.

The late Mr. Hetherington was the first to attempt rearing vegetables on a large scale. He introduced asparagus, which now succeeds admirably at Shanghai, rhubarb, seakale, and all the vegetables common in English gardens.

He also raised the strawberry from some seeds I sent him in 1846, but curious enough, although it grows luxuriantly, it scarcely bears any fruit.

The blossoms appear to go blind soon after they expand. I have no doubt, however, that some method will be devised to overcome this habit, and I expect to see strawberries produced in great abundance and in perfection in Shanghai. The ground about the town is too low and wet for the growth of the potato, and hence no one has succeeded in rearing what would be called a good crop of this desirable vegetable. In the course of time, however, when the cultivation is attempted in the higher parts of the country, we may expect to get better potatoes here than at Macao, although the latter are usually most excellent.

Mr. Hetherington fell a victim to a fever of a very fatal kind, which prevailed in the autumn of 1848. He was a true specimen of the old English gentleman, and was deeply regretted by all who had the pleasure of knowing him.

The English consul, Mr. Alcock, has also a good vegetable garden on the grounds at-

tached to the consulate. There is a noble plant of the *Glycine sinensis* in this garden, which flowers most profusely, and becomes covered with its long legumes, or pea-like fruit, which it ripens to perfection.

The two first ornamental gardens are those of Mr. Beale, and the Messrs. Mackenzie. Mr. Beale's house, a fine square building of two stories, is placed in the center of the garden. In front is a fine grass lawn, which extends from the house to the boundary wall near the river. Behind the house there is another lawn surrounded with a dwarf ornamental wall. A wide gravel walk leading from the entrance to the back part of the garden, divides the house from the business part of the premises. This garden is rich in plants indigenous to China, and also contains many which have been introduced from other parts of the world. On entering the gate, the first thing which strikes a botanist, is a fine specimen of the new Funereal Cypress nearly six feet high, and just beginning to show its beautiful weeping habit. This has been obtained from the interior, and does not grow in the neighborhood of Shanghai. Mr. Beale intends to plant another specimen on the opposite side of the gate, and when the two grow up, a very striking and pretty effect will be produced. In the same border there are fine specimens of *Weigela rosea*, *Forsythia viridissima*, *Chimonanthus*, *Moutans*, *Lagerstroemias*, *Roses*, etc., and nearly all the new plants sent home to the Horticultural Society from 1843 to 1846. In this part of the garden there is also a nice plant of the new *Berberis japonica*, lately obtained from the interior, and described in my last letter.

The American *Magnolia grandiflora* has been introduced here, and promises to be a very ornamental tree, its fine green leaves and noble flowers are much admired by the northern Chinese. Several plants of *Cryp-*

tomeria japonica are succeeding admirably, and will soon be much more beautiful than any the Chinese have in this part of the country. The garden has been raised with a large quantity of fresh soil considerably above the level of the surrounding ground, so that all the family of the pines succeeds much better than in those places where they are usually planted by the Chinese; besides, the latter generally spoil all their trees belonging to this family by lopping off the lower branches for fire wood.

Large quantities of the *Olea Fragrans*, the Qui Wha of the Chinese—are planted in different parts of the garden. These succeed much better here than in the south of China. In the autumn, when they are in bloom, the air is perfumed with the most delicious fragrance. Another most fragrant plant is the new *Gardenia*, *G. Fortuniana*, now common in English gardens, to which it was introduced by the Horticultural Society in 1845. In Mr. Beale's garden many of the bushes of this charming species are ten or twelve feet in circumference, and in the season are covered with large double white flowers, as large as a white *Camellia*, and highly fragrant. Altogether this is a most interesting garden, and promises to be to Shanghai what the well known one of Mr. Beale's father was to Macao.

I have made a great many inquiries about the potato disease in China, but it does not seem to have made its appearance. The Macao potatoes have always been good and sound.

The Messrs. Mackenzie's garden here is also well worthy of notice. It resembles some of the neat suburban residences near London. The shrubs are arranged with great taste in groups and single specimens on the lawn, and consist of all the species and varieties common in this part of China. The collection of *Azaleas* is particularly fine. During the summer time, when these plants are in bloom, they are placed on a stage, and protected from the sun and rain. They flower in great profusion, the individual flowers are larger, and the colors are more brilliant than they are at home. Here, too, are gorgeous specimens of the new *Viburnums*, (*V. plicatum* and *V. macrocephalum*.) sent home to Chiswick in 1845. The first English apple tree fruited in this garden about a year ago. The gentlemen connected with the

London Missionary Society have a village of their own about a quarter of a mile back from the English town. Each house has a nice garden in front of it, full of interesting Chinese shrubs and trees. Dr. Lockhart has the finest collection.

These short statements are sufficient to show your readers what has been done since the last Chinese war. Chinese plants have not only been introduced into Europe and America, to enliven and beautify our parks and gardens, but we have also enriched those of the celestial empire with the productions of the West. Nothing, I believe, can give the Chinese a higher idea of our civilization and attainments, than our love of flowers, or tend more to create a kindly feeling between us and them.

Before all these gardens could be stocked, the demand for shrubs and trees has been necessarily great. Things which in former days were comparatively rare about Shanghai, have been brought down in boat loads, and sold at very low prices. Good young plants of *Cryptomeria*, three to four feet in height, are sold for thirty cash each, about a penny of our money; one hundred fine bushy plants of the new *Gardenia* just noticed, have frequently been bought for a dollar. It is amusing to see the boat loads of plants ranged along the river banks to tempt the eye of the English planter. They are chiefly brought from the large towns of Soo-chow and Hang-chow, the former fifty miles distant, and the latter about a hundred. "Heaven is above," says a Chinese proverb, "but below is Hang-chow and Soo-chow."

R. F.

Gard. Chron.

Beautifying the Homestead.

We claim it to be the duty of every man who is a farmer, to plant fruit and ornamental trees, to cultivate and grow the vine, as well as all useful vegetables; to beautify and adorn his grounds and garden with flowers, plants and shrubbery, and so arrange his yards and grounds as to give his habitation as Eden-like an appearance as possible.—Should our farmers be thus true to themselves, and dutiful to nature, then with truth, of our country it might be said, in the language of the poet, 'tis

"The land of the myrtle, the cypress and vine,
Where all but the spirit of man is divine."

From the New York Farmer and American Mechanic.

Items from the Fair of the American Institute

ARGILLO WARE.—The manufacture of the Argillo stone for mantle pieces, slabs of any size, for pier and center tables, as well as door and furniture knobs, is one of the great improvements of the age.

This material is introduced as a competitor to marble for its general adaptation to all the useful, as well as ornamental purposes for which marble is used, and in some respects it is superior, on account of its being a harder substance, not so easily defaced, and its susceptibility of receiving a much more exquisite polish; while it also possesses all the beautiful shading and tints of the agate. The Albany Argillo Works are furnishing, constantly, large orders of this beautiful material in the form of door knobs, etc., etc.

IMITATION MARBLE.—Mr. T. W. Dufrene, of Chestnut st., Philadelphia, exhibited several beautiful specimens of his composition marble cement, the utility and beauty of which can only be appreciated by examination of the specimens submitted for inspection.

This cement is of great advantage for the covering of walls in edifices generally, as it perfectly resists all action of the air and of water in buildings exposed to the action of atmospheric air.

This material can be employed in the imitation of any of the precious marbles, and is said to be harder, more compact, and susceptible of a more beautiful polish than any article hitherto used for those purposes. It is superior in strength, beauty and finish, to the finest scagliola ever produced.

It can be used to great advantage for statues, busts, columns, mantles, bas-reliefs, etc.

It is also employed for the purpose of making the most durable and solid floors of greater beauty than natural marble, as it can be laid without joints, and becomes harder and more compact. The floors may be laid in many beautiful and varied patterns, in halls, parlors, public rooms, etc., where a solid and beautiful floor is desirable, and can be furnished at about half the expense of marble.

FIRE-PROOF PAINT.—Of several kinds of fire-proof cements exhibited at the Fair, the *Ohio fire-proof paint*, of Messrs. Andrews & Campbell, prepared by E. F. Mason & Co., was unrivalled. The specimens presented the appearance, and exhibited every quality of the most beautiful marble, as well as the more common kinds of freestone and slate. A silver medal was awarded for this article.

From the Ohio Cultivator.

Notes on Some Varieties of the Grape, and their Probable Adaptation to Localities.

It is said that a "grape vine will grow anywhere and produce an abundance of good fruit." To this common saying I am inclined to enter my protest as regards its truth. That a grape vine can be made to grow in almost every locality, I do not doubt; but that it will produce "abundance of *good fruit*," admits of contradiction, supported by observation and practice.

The *Isabella grape* is said to ripen finely where corn will mature, but in order that it may do so, there are many sections where corn matures well, and yet this grape requires aid from a wall, or some other protection by which it will receive additional heat, and shelter from cold.

It is not a variety that ripens as early as the *Catawba*, but from its superior hardihood it will take precedence in northern sections of our country. As a wine grape its day of favor appears gone, for in order to make good wine, the climate must be such as to ripen the fruit perfectly, and give weight to the must, and this can never be, north of a latitude that will perfect the *Catawba*.

The *Diana Grape* is a variety but lately brought into general notice. It has its advocates to favor among eastern gentlemen, while many at Cincinnati are not disposed to favor it. In color of fruit it is like the *Catawba*; the bunches and berries, however, are smaller, and from specimens I have seen

at Boston and New York, I am not inclined to favor its general introduction into this State. It will not ripen earlier than the *Isabella*, and what I have seen can not take rank as a table grape with that variety; for wine, from reasons above named, it will never pay to plant it.

The *Hamilton Grape*, (for such I think is the name of the variety given by Mr. Longworth, and it was in his collection exhibited at our State Fair, and also through his courtesy that I saw it in his gardens,) in color is like the *Catawba*. In size nearly or quite one-fourth larger, bunches long, berries loose, form round, ripens with the *Catawba*. This is the only variety, out of some thirty, received by Mr. Longworth, from various parts of the State, that gives promise of value.*

The *Missouri Grape* is a variety producing a medium, or rather small sized black fruit, sweet and agreeable to the palate, and from which a good wine is made. It is like dwarf fruit trees, adapted to small gardens, and may be planted in garden borders every four feet, trained to stakes of about the same height, when it will produce abundantly, proportionate to its extent of wood.

The *Ohio*, or *Segar Box*, is all unsuited to northern planting, but is desirable to those in Southern Ohio, or yet further south, who wish to form grape arbors, and at the same time have a good table grape.

The *Catawba*, of which so much has been written, is yet only partially known, except by pomologists or nurserymen. It is a variety that promises in Ohio to supercede all others; for while the vine is hardy, it ripens its fruit early, and if cultivators would let it alone on the vine, it would generally perfect more pounds of berries to a plant, than any other variety.

As a wine grape, we have the authority of wine growers and wine makers of Cincinnati, that it has no equal. As a table grape when perfectly ripened, it is second only to a *Black Hamburg*, and in sections of the State where the soil is adapted to the grape vine, no variety will give so general satisfaction.

A grape was exhibited at the State Fair, I think from some person in Indiana, of a color like *Catawba*, rather more reddish, berries smaller, bunches loose, and fruit, although lacking in the high aroma of the *Catawba*, yet exceedingly sweet and agreeable to the taste. Notice of it will probably appear in transactions of the Board, from the committee on grapes.

To grow grapes, and have the fruit attain such character as belongs to it, requires a soil in which lime and sulphur abound—a soil that while it retains moisture, at the same time allows all superfluous water to drain off readily. The application of manure from the privy, mingled with leaf mold from the woods, will, if the soil already contains abundance of lime, give good growth and maturity to both vine and fruit.

The trenching of the soil two feet deep and six feet in diameter, to each vine planted round one's house, or in his garden, where naturally shallow, will pay in growth and fruit ere three years have passed, at least fifty per cent. over vines planted in the common way and under the direction of the old saying, that "the grape will grow anywhere, and produce abundance of good fruit."

Notes on other varieties in a future number.

F. R. ELLIOTT.

Near Cleveland, O., Dec. 1850.

*There is some uncertainty as to what grape is here referred to.—Ed.

LANDSCAPE GARDENING.

CONTINUED FROM PAGE 21.

In resuming my pen, I shall devote a few more words to the architect. In the planning and arrangement of horticultural erections, light is of the greatest importance, and especially in those of large dimensions, light is the primary consideration; if you neglect this,

your money is virtually thrown away. An architect is, by education, taught to study and apply principles which, if carried out as I sometimes see them in the construction of conservatories and other plant structures, are often in direct opposition to nature's laws; an

observance of which is necessary to the vigorous growth and development of vegetable life. If the structure is one of importance, the architect, guided by the rules of his own art, must of necessity introduce opaque pilasters or columns of due proportion, with frieze and blocking course of the same material, in addition to which I sometimes see the back, and in some cases the end walls of masonry. Such structures may make good *ice houses*, but they are very badly adapted for the growth of plants. If my experience is worth anything, beautiful appearance can not compensate for the want of light; this is of the first importance as regards the cultivation of what we call stove and greenhouse plants. The lighter these structures can be made, (consistent with strength,) the better, and will give more satisfaction to the owner, and the gardener will get praised for what it was in his *power* to do, instead of being blamed for what it was not in his power to prevent. I have dwelt on this subject longer than I intended, but I have done so for the purpose of bringing the matter home to the breasts of all the gardeners who may read this; I wish them to exert all their influence when such houses are about to be erected, as it is for their credit they should be so constructed that they can grow the plants committed to their care in the greatest perfection; there are few gentlemen that will persist in adopting plans contrary to their gardener's wishes, if they will only present the matter in a proper light before them, and do it in a proper and becoming manner. There, then, is the gardener's power, if he will only use it, and then we shall not be compelled to see so many badly constructed greenhouses and conservatories in our walks around the country. With few exceptions, the country seats of gentlemen in the vicinity of Cincinnati are badly designed, not only in regard to the greenhouses and other structures, but in respect

to the laying out the grounds. I am well aware that on the right method of doing this, scarcely any two gardeners agree in their opinions, yet there are certain fixed principles or rules, which should be borne in mind by every one who takes upon himself the task of laying out grounds. Different plans may be proposed for a given place by different gardeners, and yet each design may be equally good. If each will always bear in mind what Pope says, "Never lose sight of common sense."

Another very prevalent error is taking the carriage road along the outside boundary of the place when good ground, and in some cases, better routes could have been selected elsewhere. This should be, by all means, avoided, where it is possible to do so.* In many situations, the natural inequalities of the ground, and the original form and nature of the tract are such, that instead of altering these to suit our principles, we must bend our principles to meet the requisitions of the case. I think there is no one circumstance connected with gardening in the United States which so much retards its progress to perfection, as the undue extent of surface devoted to what is called pleasure ground. The causes which have led to this are various, and from the experience I have had in this department of gardening, I have generally found (when I have been consulted on the subject,) that the gardener, as well as the employer, were both equally guilty of creating and perpetuating this evil. The gardener wishes to have greater scope to show his skill and talent. I am decidedly of opinion that before we can expect any real improvement to be brought about in the gardens of this country, they must be reduced to one half their extent. I think that forty-nine out of every fifty gardeners will bear me out in what I say, that

* Scarlet Oaks at Clifton has this fault, so has the place of W. B. Mooren, in the same neighborhood.

the pleasure ground at each of their places, from its great extent, takes up so much of their time and labor, that little else can be done beside the mere physical operations of mowing, sweeping, hoeing, etc., etc., (and this at the very season of the year, if he has a greenhouse, which requires his greatest attention to bring forward those plants intended for fall and winter blooming,) and all this to endeavor to keep in order what is called *pleasure ground*, but which too often is only a half kept, half neglected place, totally unworthy of being classed among the operations of gardening. Pleasure grounds, which can not be kept in high order, ought to be returned to the park or farm, as the case may be. If by reducing the extent of pleasure grounds, we should lessen the general effect and beauty of garden scenery, I should at once relinquish my position, but so far from this being the case, I believe it would be a decided improvement, by stopping what is regarded as only an uncertain struggle between nature and art, where neither prevails, to show its peculiar beauties. Let no one mistake me, and think I am an advocate for small gardens. I am the reverse of this, (self interest makes me so.) I care not how large the grounds are, provided they are kept in order. When called on to give a design for new gardens, I invariably inquire of my employer, what will be the amount of labor devoted to the gardens, and by this I am generally guided in apportioning the quantity of ground to each department.

No pleasure ground or flower garden, can be pleasing, nor can it afford satisfaction and enjoyment to the proprietor, if he is a person of refined taste, unless it is kept in the highest state of cultivation and good order.

That I may not be misunderstood in recommending this reduction, I don't mean to say that I wish the amount of labor reduced, I only wish the same labor expended


on a less extent of ground, or no advantage will be gained. A grand concentration of effect is the object to be aimed at; *extent* of surface has a great deal less to do with this matter than is generally supposed. A few hundreds of square yards of pleasure ground or flower garden, if it displays extraordinary neatness and skill will never fail to arrest attention and excite the admiration of those who behold it, and such will give a vast deal more real satisfaction and pleasure than those many acres kept in a slovenly and disgraceful manner. The chief cause of this has arisen from supposing that the utility, propriety and beauty of a garden consist wholly in the number of its acres; it is high keeping altogether irrespective of extent, which will render gardens attractive and useful. If pleasure grounds were literally what the name signifies it would be the business and constant practice of the gardener to do everything at the earliest time, it would be safe and proper to do it. Dead leaves, dead and faded flowers should be removed as soon as they appear, and all plants should be staked and tied up as soon as they require such attention. In fact, in a pleasure ground, there should be nothing to show a want of money, want of care, want of skill, or want of success, but perfection in everything, so far as season and climate will permit, nothing to detract from, but everything done and added that will in any degree heighten pleasure. This is what I suppose to be the true and legitimate end of pleasure gardening; there is probably more implied in the compound word *pleasure-ground* than in ordinary cases we are wont to ascribe to it. At least if its name be derived from its use, it would sometimes seem as if the end was either forgotten or misunderstood, by those who made the plans.

Yours, respectfully,

RICHARD DAVIES,
Landscape Gardener, etc.

ON THE VINES OF HUNGARY.

BY THE COMPTON ODART.

 SINCE the struggle of the Hungarians for release from their thralldom, we Americans have come into much closer sympathy with them; their geography, including the productions of their soil, have attracted our attention, and have assumed for us an increased interest. The strong trait of *Jonathan's* character has been busily occupied in applying to his own use the information derived therefrom. In this portion of the country, the fact that part of Hungary is a wine district, furnishing the celebrated Tokay, has induced us to suggest whether or not some of the vines which there grow and flourish, might not be well introduced into our vineyards. Hungary is chiefly an inland region, and it extends to a high latitude (48°), so that we might expect some similarity in climate.

All previous efforts to introduce the vines of Europe, have hitherto proved unsuccessful, but these grapes may be better adapted to our soil and climate, at any rate, the description of some of the varieties will prove interesting to those who are engaged in this department of fruit-culture, and the following extract from the Compté Odart's work on *Ampélographie*, or grape history, is accordingly presented to the reader.

IN treating of the varieties of Vines cultivated in the kingdom of Hungary, it is proposed to notice in the first place, those in the vineyards of Hegy-Allya, words signifying the "Foot of the Mountains," the wine from which is sold under the name of Tokay. But the Tokay mountain forms but one of a chain and produces only a small portion of the wine called Tokay. Those of Mada and Tarczal, where the two best vineyards belonging to the Emperor are situated, not only equal the Tokay as regards produce, but they even exceed it. It is erroneous to suppose that the Tokay wine is high priced on account of its rarity, or that the vineyards which

produce it are not larger than that of the Schloss Vougeot, or the small vineyards of Constance. On the contrary, they extend over 60 square miles of surface, or an area of 38,000 acres, and include about the third of the superficies of 34 mountains, situated in the district of Zemplen. Tokay is the first of this chain.

There is, however, a considerable difference in the wines produced on Tokay itself. Those vines which grow at an intermediate station on the sides of the mountains afford the best wine. The quality of the produce of the Imperial Vines on mount Tarczal is so excellent that it has received the name of *Mezes-male* or Honey-comb, and this is owing to situation and to the proper combination of the different kinds of grapes. Tokay is situated in latitude $48^{\circ} 10'$.

The Hungarian author Szirmai, of Zirma, enumerates thirty kinds of vines, and says he knows sixty that are cultivated in the district of Zemplen. I shall, however, notice those only which appeared to me worthy of being introduced into France on account of the influence which they have on the quality of the wine in the part of the mountains called Hegy-Allya.

The FURMINT, to which they sometimes prefix the words *Nagy-Szemü*, large-berried, deserves to be regarded as the principal variety. Furmint is the name by which it is best known in the Hegy-Allya. It bears also that of *Szigethy-Szoello* in the district of Wessprim, of *Zapfner* in the vineyards of Rust and Oedenburg, and the *Mosler Traube* in Styria. The name of Furmint, according to the Hungarian author above cited, comes from *foro minucü*, but the academic society of Debreczin derives it from the region *Formiæ*, resting, doubtless, on the passage of Horace: "*Mea nec Falernæ temperant vites, neque Formiani pocula colles.*"

This valuable grape was brought to France in the beginning of the present century by M. Villerasse, and cultivated successfully in the vineyards of Béziers; and about the same time, or soon after, it was sent by Gen. Maurlhan into the department of L'Herault. Its cultivation spread rapidly in many localities in the south of France. Shoots strong, short-

jointed, and generally erect, the lower part grey, the upper of a rufous yellow, streaked with brown. Leaves generally entire, sometimes slightly three-lobed, broader across than from base to apex; deep green on the upper side, very downy on the under, with prominent veins. Bunches of medium length, more cylindric than conical. Berries somewhat loose and very unequal, many being abortive six seven-tenths of an inch in diameter. At maturity they are full of a very sweet juice; but the flavor is not such as to render them worthy of esteem for desert; and I have never seen them employed as such in any part of Hungary. Some berries ripen towards the end of August in the Herault and Gard, and the whole of the bunches are ripe in the beginning of October, but at the foot of the Hungarian mountains, they are only gathered in the end of October or first week of November. Many of the berries become half dry, somewhat like raisins, on the plant. M. Baumes ascribes this to the punctures of wasps and bees, for which this variety of grape has a great attraction. The proportion of these half dried berries, *trochen beeren* of the Germans, is from one-fourth to one-third in the canton of St. Gilles Gard, but it was much less in the vineyards where I have assisted in the Hegy Allya.

There is a variety of *Furmint*, but it is not so much esteemed as that sort, because none of its berries dry like raisins. It is called the *MADARKAS-FURMINT*, or *Bird Furmint*. It is also known under the name of *Holy-Argos*. The birds, more especially the thrushes, are very fond of this grape, the berries of which have a honied sweetness.

FEHER-GOHER, or *FEHER-GOJER*; both are pronounced *Fa-ir Go-ir*, and signifies (Fair-early) *early white*. This is cultivated for an early vintage. Its bunches are long, with oval berries, thinly disposed; they are much better to eat than those of the *Furmint*.

HARS LEVELU, *Lime-tree-leaved*.—The bunches are very long, almost cylindrical, furnished with round berries, the juice of which is very sweet. The wood of this variety is easily recognized in winter by its smooth red epidermis.

BELAFANT bears considerable resemblance to the preceding, in the general appearance of the bunches. The berries are very round, yellow, thinly set, and so transparent that at

their complete maturity, one might count the seeds. The shoots are vigorous, leaves entire, thick, very broad, downy beneath, but less so than those of the *Furmint*.

FEJER SZOELLO, *White Grape*.—This is cultivated to a considerable extent, perhaps too much so in the *Hegy Allya*. It is very productive, and although the berries do not dry, yet the juice is turned to account for mixing with that of other kinds. It is easily recognized among others by its abundant bloom, the berries appearing as if they had been thickly powdered over. It is prudent to eat this with reserve, for it is very relaxing; it is, however no great privation to refrain, as its quality as a table fruit is only indifferent. I suspect it is not good for wine as the common wines are generally bad, and this variety being in greater quantity than all the others, probably a large share of deleterious influence is attributable to it.

NARANKAS, *Leany-Szoello Nagy-Szénu* and *Kiseeb-Szémà Leany-Szoello*; that is to say *Raisin des filles à gros grains et à petit grains*.—These are also very commonly to be met with among the vines in Hungary. They are vigorous and produce handsome bunches with oval berries. The variety with small berries have these of a more yellow color than those of the *Nagy-Szénu*. They form but a very small proportion of the vines cultivated in this region.

BARAT—*Txin Szoello*, *Rasin couleur de Robe de Moine*. It is also the *Klein Roth Szirifandl* of Rust, and the *Rother Tokayer* of the Rhine districts.—Bunch small, berries round, grizzly or of a color between grey and red. Although it is called the *Rother Tokayer*, red Tokay, I believe it is but little cultivated in the vineyards on that mountain. It is more abundant in those of Rust, in the district of Oedenburgh.

MUS-CATALY, in some districts *Fejér Denka*.—This is allowed by various good authors to be the same as the white *Frontignan*; but the *Compte Odart* thought it less vigorous than that sort. Berries smaller and not so close. All this however, may have been owing to the condition of the plant.

The Muscat wines of *Hegy-Allya* are very different from those in the south of France. They are highly perfumed, containing much spirit, but they are very dry. The best use that can be made of the Muscatly grapes is

to put a small quantity of them along with the vintage of other varieties, to the wine, of which they communicate an agreeable bouquet. There is a red variety of Muscat very common in the vineyards of Magyarath. under the name of

VOROS-DENKA, Red Muscat. It produces an esteemed wine, but not having brought the plants from Hungary, I cannot say whether it is exactly the same as the Muscat reuge. [The latter is the red Frontignan of the English gardens]

There are some inferior varieties occasionally to be met with, which ought to be extirpated, because of their unfavorable influence on the produce of the sorts already mentioned. Among those which I have observed, I may mention the six following sorts: **PEYTRES SELYMES SZOELLO**, the Peter Sillen Traube of the Germans, the Parsley-leaved of the English, and the little esteemed Ciotat or Raisin d'Autriche of the French; the **FEJER-GEESSET**; the **KIRALY EDES**, or **Doux Royal**; the **SAR DOVANY**; the **DEMJENY**; the **ROSAS-SZOELLO**, or rose colored Grape.

Besides the vineyards of the Hegy-Allya there are others which have considerable reputation, not only in Hungary but also in Germany. For example, in the district of Bihar they make a white wine, which we find on the best tables of Pesth and Vienna under the name of **BAKATOR**, from a wine so called, and which has also the name of *Alfoldy* in the country beyond the Theiss. Berries ovate, frequently elliptic or oblong, yellowish white, very fleshy, but juicy notwithstanding.

GRANAT TZIN BAKATOR is of a granite red, as its name implies. The leaves are much cut, downy beneath. Bunch not large; berries loose, round; their red color changes to violet at complete maturity; too late for the climate of France.

The district of Komorn, where the remarkable vineyard of Neszmély is situated, near the right bank of the Danube, affords some valuable varieties, at the head of which we ought to place the

SAR-FEJER SZOELLO.—This does not probably exist in the vineyards of Tokay, because it ripens fully a month earlier than those generally cultivated there; but it is very common, and much esteemed in the vineyards situated near the Balaton Lake, in those of Schomlan, Gyon-Gyos, and more especially

in those of Neszmély in the district of Komorn. It resembles the Burgundy White Cluster, but the berries are somewhat oblong, and smaller than those of the sort just named.

HAMVAS-SZOELLO, Ash-grey, *Grau-Tokay* of some Alsaciens. Resembles the Grey Burgundy.

BUDAI FEJER, at Neszmély; *Weiss Honigler Traube*; *Bela Orkugla Ranka*, early round white; *Fruh Weiss Magdalenen*, of many German vineyards.—Grown in a good soil the wine of this variety is said to rival that of the Muscat as regards its bouquet and aromatic flavor.

SZOLD SZOELLO, green Grape; *Szemendrianer Magyarka*, in the Banat; *Welika Szelen* or *Szelenika*, in Sirmia.—Its berries are very large, oval, of a green color. The juice is abundant and sweet, but of only moderate flavor. It ripens late, yet it is esteemed, because it resists the autumn rains.

When we have named the *Bela Slakamenka*, the *Bela Kadarkas*, the *Modu* or *Juh Farka*, which is the *Langstaengler* of the Germans, we think the best white wine Grapes have been enumerated.

Black Grapes employed for the Fabrication of Red Wines.—When in Hungary, I preferred the red to the white wines, both as regards the *vins ordinaire* and *vins de liquer*. They are not, however, equal to our best French wines. The common wines of Hungary are very heating; they will bear no comparison with our burgundies. I shall only notice one red *vin de liquer*, the most distinguished of all, although unknown in France. It is a wine produced by the vineyards adjoining a small town called *Menes* (pronounced *Menesch*.) It is less spirituous than the old Tokay, but richer in bouquet and juice. They make it also in Sirmia, and in the vineyards of Erlaw and Gysrak. As the same varieties of Grapes serve for the fabrication of both the luscious and common red wines, I shall confine myself to the notice of a few of those the most generally esteemed.

The **KADARKAS**, to which they often prefix *Cerna* or *Fekete*, the former being the Slavonian and the latter the Hungarian term for black. It is the *Edel Ungarische Traube* of the Germans; and the *Raisin Noir de Scutari* of some. This is the only variety of black Grape which affords dry or raisined

berries, *troken-beeren* in Germany. In addition to this valuable property, it has others which concur in rendering it worthy of being placed in the first rank. It communicates a fine color and an agreeable aroma to the wine made from it. The plants grow rapidly and produce the third year; and this natural productiveness is long maintained. In short, if this Vine, from its precocity, is liable to be slightly affected by the late spring frosts, yet its flowers are hardy, and it fails not to yield a crop. The bunches are large, long, cylindrical, rather loose; berries middle-sized, black, ripening early in Hungary. Its leaves are of a deep green above, for the most part entire, but some have the lobes well marked; the undersides are cottony. The vintage of the Kadarkas Grape forms three-fourths of the composition of the Menes wine. The vineyard is situated on the lower part of the promontory of a branch of the Carpathian chain, in the district of Arad. The soil is argillaceous, of a brownish red color, and mixed with gravel. In some instances the clay is yellowish, and then it contains less gravel.

TOROK GOHER. *Nagy Szemu Fekete, Fűhe Turkische*.—The first and third of these are the Hungarian and German words for "early Turkish;" the other signifies "large-berried black." Next to the Kadarkas, this is the most esteemed in the principal vineyards for red wine in Hungary, especially those of Gyon-Gyos. Its leaves are broader, rounder in the outline, and more obtusely dentate, than those of the Kadarkas. The young shoots are reddish brown; bunch conical, loose, shouldered, and not so long as the preceding variety, but the berries are much larger, of a round form, with very succulent and rather coarse flesh.

PURCIN, Upper Hungary; *Fekete Vilagos*, in the district of Szalader; *Kleine Schwarze*,

of Ofen.—The bunches have generally small cylindrical shoulders; the berries are small, round, and black; the juice is vinous, and of good color when the Grapes are well ripened, which is the case every year, although rather late. It is much esteemed in the red wine vineyards.

CZEERNA OKRUGLA RANKA, Black Round Early.—This is the same as the *Auternat Noir*, the *Pinot*, or *Noirien* of Burgundy. This is cultivated more especially in the vineyards of Sirmia and in the Banat. The red wines of the dutchy of Sirmia were reckoned the best in Hungary till the middle of the seventeenth century, when their reputation came to be gradually ceded to the wine of Tokay.

BLAUER AUGUSTER (*Blue August*.) Bunches loose; berries oval, of a bluish black, with long, slender red pedicels.

I have not mentioned the Vines with the produce of which some proprietors compose a detestable imitation of Champagne, the only point of resemblance being that of a sparkling, of short duration. I had some of it both at Pesth and Vienna, and the taste was horrible. The wines was evidently a fabrication by chemical processes. If the Hungarians wish to make sparkling wines at all comparable with genuine Champagne, they must renounce the proceedings of the chemist and plant the Black Burgundy Grape (*Morillon noir*, *Pianol*.) not entirely at the foot of their mountains, but on the lower parts, and I doubt not that by admitting *no white Grape*, and with the assistance of a cooper from Rheims, they would insure a degree of success incomparably greater than that resulting from the almost ridiculous attempts which they have hitherto made. We should suppose many British colonists would profit by this remark.

BUDDED AND SEEDLING PEACHES.

MR. EDITOR: In your third number, a correspondent calls your attention to the subject of "budded peaches," which both yourself and he think, was left in a "very" "unsettled," or "unsatisfactory state, by the fruit convention at Columbus last year."

If you recollect, it was myself that introduced that discussion, by way of inquiry. I had commenced the cultivation of the budded peach, in good faith, never having heard a whisper against its bearing qualities. But I found, after testing the matter with an hun-

dred trees, some five or six years old, that, while the common fruit bore plentifully, the budded, with one exception, had only yielded a few specimens. And having made inquiry of some of my neighbors, I found that their experience with the budded peach, corresponded with my own. At this stage of the investigation I made inquiry as above, of the Fruit Convention in 1849. And Messrs. Gest, Tolland, Sites, Strickle, Ruff and Campbell, all held substantially the same views. Mr. Campbell, who was a delegate from the Cincinnati Horticultural Society, made the following statements: "he was acquainted with nearly every prominent peach orchard in the Miami Valley, and could fully corroborate the statement of Mr. Springer. Good orchards of budded trees, well cultivated, failed to bear, while seedlings produced abundantly. Budded peaches are getting out of repute in the Miami valley. In some counties, say that of Darke, there are now few orchards of budded varieties, but many of seedlings," etc.

The only statement which seemed opposed to this general testimony, was that made by Mr. Elliott, of Cleveland, as follows: "that as an offset in part, to statements of gentlemen from the southern part of Ohio, he would state, that this season, so far as he had seen in his section, budded varieties had produced best. That trees of Orange and late Red Rareripe had produced fruit within ten feet of seedling trees, while the buds of the latter were all killed." There must have been something special in Mr. E's case, and it forms only an exception to the general rule, as will be seen directly by the statement of Prof. Kirtland from the same place. Perhaps the two kinds he names are among those which are adapted to our climate.

We do not, therefore, consider, that there was any thing "unsettled" or "unsatisfactory," in the deliberations of the pomological

convention under notice, as to the fact that the present *variety* of budded peaches, in this State, are, in *general*, very unproductive; far more so than seedling varieties. That question, we consider, was there settled with a unanimity of opinion rarely to be found in deliberative bodies. And the numerous items of information that we have since received, through the whole range of the State, from Cleveland to Cincinnati, go but to confirm the correctness of the decision.

But, as it respects the *cause* of this unproductiveness, this subject, we admit, was left "unsettled." The truth is, that this appears to have been the first ray of light that was ever shed on the *general* barrenness of the cultivated peach in Ohio. We have no recollection of ever seeing the subject alluded to before. We had been familiar with the habits of our own budded trees, in this respect, for a few years, but never once suspected that their want of fruitfulness was not the result of something peculiar to their locality. And this we presume to have been something like the common sentiment of our peach cultivators, until the deliberation here referred to.

The unproductiveness of budded peaches, being assumed as a general fact, I was anxious to obtain an explanation of its cause, and wrote an article for the "*Guernsey Times*," calling for information upon the subject. This article was republished in a number of papers, and elicited some discussion. In this article the following suggestions were respectfully made:

"This want of productiveness is probably owing to one of three causes, or to their combined influences in whole or in part.

1. Budding may have a tendency to depreciate the bearing qualities of the peach.—Or,

2. The selections may have been made, originally, in general, from such trees as bore shyly, and gave large specimens, simply because there are few on them; Or,

3. The trees may want age, and will proba-

bly do better in the bearing way, when the vigor of their growth shall have been checked.

Who can give us any light upon this subject?"

Having especially called on Dr. Kirtland for the result of his experience in the peach culture, we take from his article, in the *Family Visitor* of February 14, 1850, the following extract from his reply:

"It would afford us pleasure to furnish our friend Mr. S., any light we possess, on the subject to which he refers.

The result of extensive experience has convinced us of the correctness of his *first* conclusion, to wit:

'That budding may have a tendency to depreciate the bearing qualities of the peach.' In 1824, we procured, from Burlington, fifty varieties of New Jersey peach trees. They were all budded, and were very healthy.—The same season we obtained from the vicinity of Middletown, Ct., a quart or two of peach stones produced from trees not budded, and said by the raiser, to be of a good kind.

From these sources we were well stocked with a variety of peach trees in the course of a few years. They were set out on a dry loam, resting on a stiff and impervious hard pan of iron ore, gravel and clay, in Trumbull county. Those raised from the stones were permitted to remain in their natural state.

At the end of eighteen years, the budded tree had produced abundant crops four seasons, and limited supplies perhaps as many more. The natural stocks were equally productive in those seasons, and on several others bore good crops, while the budded ones failed. They generally proved of valuable kinds. Impressed with the results of this trial we commenced another on removing to our present location on the Lake shore, eight years since.

From a basket of Morris' Red Rarieripes, presented us by J. W. ALLEN, Esq., of this city, we raised about thirty trees, and have cultivated them with proper attention, but have not changed them by budding. During the last three years they have yielded heavy crops, and during the two prior years all my peach trees did the same, but the last seasons were unpropitious for peaches, and most of my budded kinds produced very small quantities—still, I had the satisfaction to see the

natural trees bending under their loads of fruit.

Four-fifths of the seedlings bore fruit resembling the parent kind. A few sported in variety, and one ran back into a worthless woolly Fall peach.

We believe it a better way to stock our grounds principally with natural kinds, selecting, however, a few of the best budded varieties for their superior qualities. In conformity to this opinion, we are annually raising and cultivating a few young trees, to keep our stock good, and we employ only the stones of the best kinds. If, after testing seedlings, they prove inferior, we head them back in the spring, and change them by budding, in August.

After a year's observations and reflections upon this subject, we are *inclined* to the following opinions; (but still open to "light:")

1. That budding has a tendency to alter the character of the tree to some extent. See, for instance, what small petals or blossom leaves, the budded varieties in *general* have. If budding does not cause this, what does? Some are of opinion that the want of the full development of these petals as protectors to the fruit, is the main cause of its destruction by frost. But still budding can have but a small share in producing the barrenness of which we complain, because these same Burlington peach trees of our Cleveland friend, in the climate of New Jersey, would have been far better bearers. From personal inquiries, as well as from other sources, I find that from Baltimore to New Jersey, the hog peach, as they call the seedling, bears some better than the budded fruit, but there is nothing like the difference in the productive qualities of the two there as with us.

2. Over stimulation of the trees by extra culture, will no doubt impair their bearing qualities. Trees of rapid growth of any kind bear poorly, and we see no reason why the peach should be exempt from the law which governs other vegetables. And it is a very common practice, when men plant choice fruit,

to give it extra attention. But still this will not account for the whole of the difficulty, for among our hundred trees there are about ten missed in "working," which bear nothing but the common peach. These have the same culture as the others, yet they bear so abundantly that it retards their growth in comparison with their barren neighbors.

3. But neither of the foregoing suggestions account, in our judgment, so extensively, for the non-productiveness of the budded peach, as the consideration which supposes, that originally, they have been mainly selected from trees that bore shyly, and gave large specimens, simply because there were but few on. We have been so greatly deceived, in this way, by selecting large showy apples, on the credit of public fame, which, on testing, were rendered worthless by their unproductiveness—splendid as they were—that we are led on this ground to suspect the peach. We called on the Editor of the "Guernsey Times" to state what he knew about the Ogier peach, a seedling of considerable reputation in his vicinity. He replied by stating that "the parent tree is a very shy bearer, and hardly worth cultivating. When it bears—which is but seldom—it has a light crop; but the fruit is the largest and most delicious kind; we have never seen any thing of the peach variety to excel it." And of those that have been propagated from it by budding, we give the same character. In this Ogier peach we have the history, no doubt, of a large number of the cultivated kinds.

4. At last, our location must have more to do with this subject than any thing else, because, in Maryland, Delaware and New Jersey, the budded peach produces profitable crops, but when transferred to Ohio, there is a great falling off in productiveness; and what can be the cause of this, but our location? It will be seen on examination that it can not be because we occupy a more northern latitude,

but is probably owing to the sudden transitions and instability of the weather, caused by the warm breezes of the Mississippi Valley, and the chilling blasts of the northern Lakes, which,—to speak a little poetically,—toss us hourly, according as the one or the other prevails, to Greenland or the Gulf of Mexico and back, as suits their sportive humor.

A writer in the Cincinnati Gazette, signed "N.," in reply to our article in the Guernsey Times, after stating that his "experience fully corroborates" our doctrine of the "unproductiveness of the budded peach," but denying the plausibility of the causes we suggested, adds:

"The cause of our budded peach trees not bearing as well as our natural ones, in my opinion, is, our nurserymen have gone to the south to select their varieties and, as a natural consequence [which is the case with most of our fine kinds] the buds swell much earlier and blossom sooner than our common kinds, and the young peach is less protected by blossom leaves and therefore, more liable to be killed by frost."

This article in the Gazette you had no doubt read, as you endorse it in your last paper, in the following language:—"It has happened, however, that some of our own seedlings have borne with more regularity, than some of the budded varieties beside them, which have been introduced from southern Europe and from the Southern States."

Being somewhat surprised to see such hypothetical opinions adopted, without examination, by Cincinnati Horticulturists, I looked over Downing with reference to the nativity of budded peaches, and the following is the result: He gives seventy-six varieties beside the curious or ornamental. Of these, thirteen originated in France, nine in England, eight in New York, ten in New Jersey, three in Pennsylvania, two at Baltimore, three in Long Island, one in New England, one in Massachusetts, one in South Carolina, seven-

teen Native or American, without giving the particular locality, four in Europe, without saying where, and four without any designation.

Thus it will be seen, that, so far as the nativity of the budded peach is known, very few of them originated south of Cincinnati, but most of them considerably to the north, both in Europe and America. Indeed, there can be but one, on the whole list considered a southern peach, that is the Lemon Clingstone, from South Carolina. But this was brought north by a gentleman of New York, before the war of the revolution, so that it is both naturalized and acclimated, which leaves not a solitary authenticated fact to sustain the hypothetical reasonings of the Queen City.

As to blooming, we believe our budded and natural trees opened about the same time. We have heard the same statements from others. See Mr. Gest's of Green County, Fruit Report, 1849, page 17.

Admitting the correctness of the foregoing statements, with regard to the unproductiveness of the budded peach, the most important question still arises, can any thing be done to improve the Ohio peach in this respect? Certainly. And I should not be surprised, if suitable attention be paid to the subject, that in time, we rival New Jersey, both in productiveness and quality. But we are only just on the threshold of our experience. Our cultivated varieties have been chiefly transplanted from a distance, into a different and peculiar climate. And we see no reason why the constitution of a vegetable, removed from one location to another, would not be affected similar to that of man, and as much need acclimation. That Ohio is well adapted to the peach, is seen by the success of native varieties, which, in many localities, seldom refuse to bear.

We have little doubt, but, the practice sug-

gested by Dr. J. P. Kirtland, of "stocking our grounds principally with native kinds, selecting, however, a few budded varieties for their superior qualities," is the correct course, and the only one to insure final success. And, then, after originating superior kinds, to bud from them. These being natives, will be accommodated to the peculiarity of our weather. It will be seen by the above statement, with regard to the nativity of the budded peaches, that the most of the American varieties originated in and about New Jersey, which at once accounts for their success in that State. And Ohio will have to practice on the same principle, as the acclimating process may be tedious, and will probably never succeed as well as the other.

As there are a few of the imported kinds, which are said to be tolerably productive in the west, cultivators who have such under their care, should, by all means, report them through your columns, or some Agricultural paper of general circulation in the State, as well as such varieties as are unproductive, so that the public may become acquainted with the valuable, and be put on their guard against the worthless. They should also give information of any valuable seedlings. In this way great service may be done the public, and it would be unpatriotic in those who have it in their power not to render it.

We see much clashing of opinion in the papers lately, on the probability of success in propagating from seedlings. Some report themselves to have failed almost entirely, while others have succeeded beyond their most sanguine expectations. This can all be accounted for philosophically. It is owing to the time of blooming, or the situation of the tree from which the pits are taken. If it should blossom either earlier or later than its neighbors, or should it stand to the windward of the orchard, or in some solitary situation, your chance for propagating the same

kind is tolerably fair. But, if it should be in the midst of a crowd, and bloom at the same time with them, the pollen from the surrounding blossoms will be sure to impregnate, and alter the character of the fruit, so as to render a failure almost certain. Plant an ear of red corn by itself, and you will have all red corn. But plant it, surrounded by white corn, and you will have very few red ears, but hundreds of "bloody butchers," as the boys call them. Just so far as the winds drove the pollen from the tassels to the silk on the neighboring ears of corn, so far will there be a mixing or altering of kinds. And substantially the same laws govern the peach. Were it not that pollen is carried either by the winds or bees from one blossom to another, every variety of fruit would produce its like.

In regard to budded fruit producing the same from seed, we have no experience; but we have a very productive and valuable seed-

ling, which compares in size, with any budded variety we cultivate, of that, in one trial we obtained six out of seven true to the original.

And now, Mr. Editor, permit me to infer from this peach question, the value of Western publications to the Agriculture and Horticulture of the States. Of how little importance, comparatively, are the speculations and experiments of Eastern writers, to us, whose soil and situation are so widely different from theirs. If these great interests are ever properly sustained, it must be by supporting papers in our own country, through which we can report the investigations of our peculiarities and wants. You therefore deserve well of the public, for your enterprise, in getting up a medium through which we may promote the interest of Western Horticulture; and you are entitled to a liberal patronage.

O. SPRINGER.

Meadow Farm, O., Jan., 16, 1851.

THE FRONTISPIECE.

THE AMERICAN ELM, *Ulmus Americana*.

THIS tree appears to be deservedly a favorite in all the parts of our continent in which it grows, that is, from Tennessee to Canada; in this extensive range it flourishes, and often attains a great size, in rich or damp soils. Whether it be owing to the taste of our citizens, which would be a good indication of their progress, or whether it be that this tree is of comparatively little value as firewood or timber, and often from its great size, very difficult to work up and remove, which is the more probable cause, the elm is more frequently seen as the last survivor of the forest than any other species, and is often met with, offering its kindly shade to the cattle in their pastures, or to the wayfarer by the roadside. Being tenacious of life, easily transplanted, and of quick growth and spreading habit, it has also

been much used for shade in towns and villages, and in some rare instances, of good taste, it has been used for stately avenues in the country, for which purposes it is admirably adapted.

The following observations are quoted from the able *Report on the Forest Trees of Massachusetts*:

"The American elm is, in most parts of the State, the most magnificent tree to be seen. From a root, which, in old trees, spreads much, above the surface of the ground, the trunk rises to a considerable height, in a single stem. Here it usually divides into two or three principal branches, which go off by a gradual and easy curve. These stretch upward and outward with an airy sweep,—become horizontal, the extreme branchlets, and, in ancient trees, the extreme half of the limb, pendent, forming a light and regular

arch. This graceful curvature, and absence of all abruptness, in the primary limbs and forks, and all the subsequent divisions, are entirely characteristic of the tree, and enable an observer to distinguish it in the winter and even by night, when standing in relief against the sky, as far as it can be distinctly seen.

"The American elm affects many different shapes, and all of them beautiful. Of these, three are most striking and distinct. The tall *Etruscan vase* is formed by four or five limbs, separating at twenty or thirty feet from the ground, going up, with a gradual divergency to sixty or seventy, and then bending rapidly outward, forming a flat top with a pendent border.

"The single or compound *plume* is represented by trees stretching up in a single stem, or two or three parallel limbs, to the height of seventy or even a hundred feet, and spreading out in one or two light, feathery plumes.

"The elm often assumes a character akin to that of the oak; this is when it has been transplanted young from an open situation, and allowed always to remain by itself. It is then a broad, round-headed tree. The resemblance to the oak, however, never very striking, is entirely lost as you approach and stand under it. The mighty, abrupt strength of the oak is not visible, and you have, instead, the graceful majesty of the elm.

"Michaux says, 'the buttonwood astonishes the eye by the size of its trunk and the amplitude of its head; but the white elm has a more majestic appearance, which is owing to its great elevation, to the disposition of its principal limbs, and to the extreme elegance of its summit.'

"The character of the trunk is almost as various as that of the general form of the tree. You sometimes see it a straight, gradually tapering column, shooting up to sixty or eighty feet without a limb; at other times, an inverted small branch or two, pushing out at the fork, hangs waving downwards for some feet. Again you see it a verdant pillar of foliage, feathering from the branches to the ground.

"The elm bears pruning better, and requires it less than almost any tree, for it usually throws out no branches below a height of twelve to twenty or thirty feet. It grows, too, with great rapidity, for its roots run, just

beneath the surface, to a great distance, and thus get the best of the soil."

The picture presented in this number is a portrait. It represents one of the most beautiful, if not one of the most characteristic forms of this glorious American tree. In the eastern states, the European elm is much cultivated, here it is almost unknown, indeed, we have so many fine specimens of native growth, that it will probably be a long while before we can expect to see many planted; and numbers of our own are so beautiful, that they will probably be preferred, especially while we can preserve such specimens as the one here represented, it is hardly to be supposed, that any one planting for shade and ornament, would wish for an elm of any other kind than the White or American, *Ulmus Americana*.

This specimen tree grows in rich bottom land, on the margin of the stream, Mill Creek, which, indeed, has made such frequent deposits of silt and drift about it, that the roots are covered deeply, and the stem, instead of the remarkable enlargements starting out to form the immense superficial roots so characteristic of the elm, appears, in this case, to rise from the very surface of the ground in a regular cylindrical column.

This tree grows in the middle of a country road which passes along the west bank of the stream, and as this is one of the favorite rides out of the city, it must be a familiar object to all who love that quiet drive, and it has been admired by thousands. The stem is not very large, measuring fifteen feet in circumference at five feet from the ground. When first seen from a distance of one or two hundred yards on either side, the fine round and widely spreading top, with an average diameter of one hundred feet, and an equal height, makes the stem appear wholly out of proportion and unable to support the immense weight of its crown. No one who from the distance ad-

mires the symmetry of this tree, can realize its immense proportions until he reins up his horse when near the trunk and discovers its great size, and from that point observes the extent of the branches, and the breadth of the shade they cast.

To give some idea of the size of this tree, the artist has introduced a figure with hat and handkerchief held out at arm's length, just as they were extended when the sketch was taken, and the figure was so placed as to be concealed by the tree, the two objects being barely visible from the artist's seat a hundred yards distant.

The Hamilton Railroad will pass close by this elm, and it is to be hoped that Mr. Hopple who owns the ground, will have the taste to preserve this fine tree from harm, by fencing it in, so that every one who passes along in the cars may enjoy an opportunity of beholding so magnificent a specimen of one of our most beautiful forest trees. Indeed, the proprietor, in refusing to sell the tree, with the ground necessary to protect it, has given his assurance, that it should not be sacrificed. The

contemplation of such an object, which, by its age, connects us with a previous dynasty of a former race, involuntarily carries us back to the past, and excites the desire to hear the narration of events long lost in oblivion.


"Wise with the lore of centuries,
What tales, if there were tongues in trees,
That giant elm could tell."

It has often occurred to me, when gazing upon this truly magnificent specimen, that it must have been for a long time, the sole occupant of the ground upon which it grows. This may be inferred from its low branches and spreading top, instead of the tall, graceful stem and flat crown, so common to this species when grown in a forest. If such have been the case, we cannot doubt this was a noted object among the Indians, who,

"On Mah-keh-tew-ah's flowery marge,"
reclined beneath this tree. Here,

"The weary hunter from the chase
Rested beneath his shade;
In the twilight pale, the lovers tale
Was told the dark-haired maid!
And gathering from the mountain sides
When roused the braves to war,
Like a banner he, the old elm tree,
Waved on the sight afar."

ANNIVERSARIES.

 I like Anniversaries—they have a good effect in carrying us back to our small beginnings, and while we may, perhaps, feel proud of the advances we have made, these occasions must also act as a stimulus to greater efforts. Why can we not have our annual birth-day meetings? Our society is still in its infancy, but do not children enjoy their birth-days more than adults?

The Charter of the Cincinnati Horticultural Society was granted on the 27th day of February, 1843, but the organization commenced two years earlier; on the 17th of February, 1845, when the first meeting was held at the house of Robert Buchanan, Esq., and subsequently the society was fully or-

ganized by the election of its officers and committees.

The following address by President Walker, will be read with interest, as it shows the flourishing condition of Horticulture in New England, and will encourage us to increased efforts to emulate their success. Mr. Walker recommends the erection of a Hall—a subject that has had its advocates with ourselves, and which many of our members hope to see realized. The proposed experimental garden will be a desideratum—one which we are not yet prepared to adopt, however.

The transactions of that society, will be read with great interest, and we in the west, may hope to receive enlightenment from some

of those extra numbers which the President recommends. Another feature not practiced with us, but which might be productive of great improvement, is a committee to visit gardens—but the readers will prefer to see what President Walker says:—

Massachusetts Horticultural Society.

THE annual meeting of the Society was held in the library room in their Hall in School street at 11 o'clock this morning. The President of the Society, SAMUEL WALKER, Esq., on taking the chair, made the following address to his associates:

Gentlemen: Laboring together as many of us have done for nearly a quarter of a century under, as we trust, the guidance of that all-wise Providence, whose works have been our study and delight, we are again called to enter upon the respective duties assigned to us by the Society.

That oneness of purpose and action, which has been so characteristic of the members of the several committees, together with their increased knowledge from the past experience and the judicious rules and regulations that they have from time to time adopted for their future action, gives assurance, that they will be able satisfactorily to discharge all the duties imposed upon them, notwithstanding the increasing exhibitions at the Hall, and the more frequent applications for information respecting new fruits, etc., from abroad.

It gives me great pleasure, gentlemen, to state that the purpose for which this society was established has so far, it appears to me, accomplished all that its most sanguine friends expected; still there remains much to be done.

The future action of its members will be stimulated by the reminiscence of the past, and the recollection of the labors and donations of its founders and benefactors; these will cheer their path and act as a talisman on their future aspirations, while the history of Mount Auburn will be a record, in all coming time, that the members of this society, some of whom are now present, were the founders of that "Garden of Graves," and that to its first President, General H. A. S. Dearborn, are the members of this society, and the public indebted for the beautiful and chaste arrangement of this, the last resting place of so many of the great and the good.

The Committee to visit Gardens, and to ascertain as far as possible the best mode of cultivation, in the vicinity of Boston, have had every facility afforded them by the courtesy and kindness of the proprietors of all the places they visited. In these examinations they found many things worthy of imitation, and much to admire. I would again respectfully recommend this interesting branch of our labors to the fostering care of the society, and also call its attention again to that noble and interesting subject—Landscape Gardening. For my views more fully on this department, permit me to refer you to the remarks in the last annual address.

The increasing taste for horticultural pursuits requires prompt and corresponding action, to enable us to keep pace with the times. The question with us now is, not *what can be done*, but rather *what shall be done first* to meet the demands of the community and the wants of the Society. An experimental garden—enlarged, and more extended annual exhibitions under tents, etc., are subjects full of interest, and may well occupy the attention, and hereafter require the deliberate consideration of the Society. But, gentlemen, a permanent Temple of ample dimensions to meet all the wants of the society and the wishes of the public, is the first thing that I would suggest for your consideration; let us obtain a suitable location, a HOME; for this purpose let us economize our resources, tax our time and our energies, and if needs be, our fortunes, for this desirable consummation of the wishes of our friends, and the founders of this society; many of them saw only through the vista with the eye of hope; it is our duty and our privilege to carry out their designs, and to fill up the picture as it once presented itself to the vision of the Lowells, the Storys, the Lyman, the Brimmers, the Curtises, the Bradlees, and the Princes.—Without a Hall to exhibit, to advantage, all the specimens raised by horticultural efforts, we cannot fully accomplish our highest aim—the dissemination of a knowledge of, and a love for horticulture; imbue the public with this, and the emulation that it will create between amateurs and the competition among cultivators for the market will be sufficient to fill, in a few years, the largest hall we could desire to possess.

Having expressed my views thus frankly,

on this subject, permit me to touch upon details by suggesting whether a Hall, in every way suited for Horticulture, might not be built and fitted up with reference to its soul-stirring kindred spirit, music, where the warbling voice of the "Bird Song" might be wafted like the gentle zephyr, among the trees, the buds, the blossoms and the flowers, to ravish the ear, while the eye should be charmed by the gems of lovely spring, or the golden drops and purple hues of gorgeous autumn.


The third number of the *Transactions and Proceedings* of the Society, which will complete the first volume, will soon be published. It has been delayed from causes over which the Committee of Publication had no control, and which will be set forth in the introduction of that number. The History of the Society, by General Dearborn, is a document of

great interest. The propriety of printing an extra number of copies of this part of the work, for the use of its present members and and for future reference, is respectfully submitted.

The report of the Finance Committee will show the estimated value of the Society's property, together with its income and expenditures. The increased appropriation for premiums and gratuities for the present year have my cordial approbation.

I cannot close these brief remarks without again congratulating the members of the Society on the success which has followed their united efforts; a continuance of the same spirit of disinterestedness, kindness and mutual esteem, that has attended their action thus far, can not fail to reward their future labors, and render their ways ways of pleasantness, and all their paths paths of peace.

CURCULIO.

 THE following communication is from one of my very best friends, and it is cheerfully received and published—for where all is avowedly unknown, every ray of light is welcome. Some may say that the experiment has failed in other hands; this is true of almost every plan which has been suggested for vanquishing the "Grand Turk."

In this case several circumstances may have conspired to produce the desired effect—The swine destroyed the fallen fruit, and jarred the trees by rubbing against them—the hardness of the surface was unpropitious to the descent of the larvæ into the ground,—and lastly, but not of least moment, the vicinity to the house exposed the depredators to constant annoyance from the movements of the inmates.—Ed.

TO THE EDITOR: I have been so much interested and gratified by the perusal of the fourth number of the *Horticultural Review*, that I sit down to ponder, what can I do to help forward this useful work, for which all lovers of fruit and flowers are politely invited

to assist, and for the perusal of which we are so much indebted to the enterprising Editor.

"In the multitude of counsel there is safety," and I have no doubt many persons feel much perplexity to select what may promise well, but, says the proverb, "Facts are stubborn things," and facts gleaned from actual experiment, may, perhaps, claim attention.

Many years since, I paid a visit to the neighborhood of Wilmington, Delaware, and there heard of the great success of Dr. Tilton, in raising plums and securing good crops. "Seeing is believing"—I drove over to the farm, and was politely received by the Doctor, a very celebrated Horticulturist of that neighborhood, who told me in answer to my inquiry, that he had tried various experiments to counteract the ravages of the Curculio—but in vain—he had fine trees in his garden and orchard, but very little fruit. At length he transplanted all that were small enough, and cut down such as were too large to remove, placed his plum trees in his house yard, which though not paved, was very hard

trodden. Every morning, a gate was opened that communicated with a hog-yard; a goodly company of swine rushed in and scattered round among the trees, and were very industrious in picking up all fallen fruit.

"These," said the Doctor pleasantly, "are my best help to preserve my plums. I give my hogs this recreation for two hours, every morning, and in the spring I call them in toward evening—you see the result—my trees are loaded with fruit, while my neighbors live on hope, that some new experiment will do better than the last."

A PENNSYLVANIA FARMER.

Curculio Contracts.

MR. EDITOR: In your January number, Mr. Longworth, in noticing the plan, (given in the December number) of preventing the ravages of the curculio, by removing the surface earth under the tree at blossoming time,

and replacing it with earth free from the insect, desires to know whether a written contract is made with the imps, by which they are bound not to use their wings to fly from the neighboring trees. The gentleman whose experience I recorded, said nothing about any bargain of that kind having been made, and I presume he is still in ignorance of the efficacy of such an instrument. If Mr. Longworth will have the kindness to forward me a copy of the contract, by which the curculio was restrained for twenty years from flying from his garden to the paved trees near his house, I will send it to the gentleman, and it will probably save him the expense of repeating the removal of earth each succeeding spring. The contract must be an exceedingly cunning instrument, and I confess to a little superstitious dread that it is an emanation from Old Nick himself. If it has any smell of brimstone, I'll have nothing to do with it.

Toledo, O.

F. J. S.

HORTICULTURAL FAIRS.

THROUGH the politeness of H. T. Duncan, Esq., the Editor has received the printed accounts of the great fair held in Lexington, Ky., last October, which appears to have been a proud day for those who participated in the exhibition. Kentuckians have long been noted for their enterprise and success in the rearing of fine stock of different kinds, and they are celebrated for large crops of corn and hemp upon their farms, but in this last exhibition, the beautiful and luscious gifts of Flora and Pomona appear to have been brought forward to occupy their due place in these agricultural meetings. May our neighbors in Kentucky continue to promote the interests of the garden and orchard, and they will be rewarded by the fruits of their efforts. The grapes, both native and foreign, grown in the open air and under glass, were said to be such

as would do credit to any country, and of the former, there were enough in some vineyards to make wine. The peaches, pears and apples, are represented as having been very fine, but judging from the small number of entries under each head, in the account of the Fair, it is apparent that the farmers have not yet been fully aroused to the importance of these things. Too many seem to think that plants and flowers may do well enough to interest women and children, but are beneath the notice of a sturdy yeoman.

In some of the towns and cities there is much horticultural taste, but when traversing that beautiful country, which has been styled "the Garden-spot of Kentucky and of the world," a region of great fertility and productiveness, occupied by extensive farms, bearing prodigious crops of corn and hemp,

the greatest defect which I observed was the almost entire absence of gardens and orchards. Lexington and its vicinity possess manifestations of a greater degree of taste than almost any other western town, but I am informed the great difficulty is to procure suitable gardeners.

May the members of the "Kentucky Agricultural and Mechanical Association," long continue to go on and prosper, and may they successfully engraft upon their title, HORTICULTURE, as the favorite handmaid of the other arts they intend to foster.

Zanesville, Ohio.

In this ancient town there are those who fully appreciate the beauties and excellencies of our delightful art and its captivating pursuit.

They have organized a Horticultural Committee in their county agricultural society, and in this way, perhaps, they can do as much good as if they constituted a distinct association.

Their premiums for the last year constituted a very liberal schedule, and a large number appear to have been given in books on scientific subjects, which must exert a happy influence upon the recipients of the prizes. From the reports of their proceedings it would appear, that there was a good deal of spirit in the meetings of the Horticultural Committee, accounts of which will be gladly received and noticed in this work, which was created for the accommodation of western interests, and must be sustained by them.

Salem, Massachusetts.

THE HORTICULTURAL EXHIBITION of the Essex Institute, held on the 25th and 26th of September, at Salem, Massachusetts, manifests the right spirit among a people abundantly well prepared by a long and earnest attention to the subject; not only by the present generation, but those which have preceded them,

even in early times. By industry and perseverance they have nearly overcome the difficulties of climate and soil.

Flowers, vegetables, and especially fruits, appear to have been presented in abundance, and they are mentioned, at this distance of time and place, because they afford so striking a contrast to the productions of a new country, where so many of our trees are just beginning to bear. The numbers of varieties is surprising. From the Report it appears that—

"The display of fruit was very fine, especially that of pears, which, for their variety, beauty and perfection, may well challenge comparison with any similar exhibition of this season. Two thousand dishes or baskets of fruit were placed upon the tables, consisting, as will appear from the list, of six hundred and seventy varieties, viz: of pears, two hundred and ninety with names, eight seedlings, and twenty-nine unknown—total, three hundred and twenty-seven; of apples, one hundred and fifty-one with names, seven seedlings, and twenty-three unknown—total, one hundred and eighty-one; of peaches, forty with names, thirty-four seedlings, eight unknown—total, eighty-two; of plums, nineteen with names, three seedlings, one unknown—total, twenty-three; of grapes, thirty-three with names, eight native seedlings—total, forty-one; of quinces, nectarines, figs, and melons, three each; of oranges, lemons, European walnuts, and cornelian cherries, one each."

This Salem must be a wonderful place for longevity. While we are boasting of our pears that begin to bear on bushes, three or four years old, these Salemites claim nearly as many centuries for some of theirs.

"Among the curiosities that attracted much attention, were pears from the original Endicott pear tree in Danvers, which tradition says was planted in 1630; some fine looking Orange pears, from a tree two hundred and ten years old, on the estate of Capt. William Allen, in Hardy street; also, apples from a tree planted by Peregrine White, the first male child born in New England, on the farm originally settled and subdued by him."

Peppermint Culture in Michigan.

From Constantine, proceeding northward, three or four miles, we entered the neighborhood, in the township of Florence, St. Joseph's county, so famous for the cultivation of peppermint. It is a beautiful section of country, consisting of burr oak plains, spread out in beautiful continuity beneath the eye; and we may here add, that these rich fertile plains extend over a considerable portion of this productive country. The extent of cultivation in this neighborhood, may be judged of from the fact that not far from 8,000 lbs. of oil are distilled annually by the producers, and sent east for sale, where it usually commands from two dollars to eighteen shillings per pound; sometimes, however, not more than fourteen shillings. We were told of one man here, who has 190 acres devoted to this crop, others have 20, 40, 80, 100, 120 and 150 acres, devoted to it.

Mode of Cultivation—Product.—In the first start, the plants are set out in rows—we think two feet apart—one man setting about half an acre per day. It soon spreads, however, and covers the whole ground. After a field is once set, it requires very little care, less than almost any other crop, very little trouble being experienced here from the growth of weeds; whereas, in the east, it is with much trouble and difficulty that it is kept from being overrun, and hence the advantage our people have over eastern cultivators, who are fast giving up the business to them.

We had been informed that it was almost impossible to clear it out of the land when once rooted in it, and that the land was rendered nearly worthless for any other use. But we learned from these people that the

very reverse is the fact. Instead of its being difficult to exterminate, it will run out of itself. Dea. John Howard, who has eighty acres devoted to it, and from whom we derived most of our information, pointed us to a fine field of wheat which, last year, was in peppermint—no trouble from it having been experienced. He said it would produce, the first year, from fifteen to twenty pounds of oil to the acre; the second year, from ten to fifteen pounds; the third year, from five to ten pounds; and so on, until it ran out. It is the common practice to turn it under the third year; and this renovates it, as it again shoots up and grows as vigorously, and is as productive as it was the first year it was set out. It is harvested with a cradle, and immediately distilled.

Those who have been engaged in it, seem to have been much prospered. While those devoted to wheat husbandry have lost their labor, these people have had abundant returns for theirs. It is not a business, however, that will admit of a great degree of competition. Indeed, the business seems to have been rather overdone the last year or two. Very little of the two last crops have been sold. It is stored at the East awaiting higher prices. Dea. H. has, we think, a thousand pounds there, and there are said to be sixteen thousand pounds there from this neighborhood. But the prospect for a market is brightening, and sales can be effected, probably, at about two dollars per pound. It is said that three-fourths of those engaged in the business in New York and Ohio, have abandoned it; and if so, it will be greatly to the advantage of cultivators here. Cultivators East cannot compete with them.

Mich. Farmer.

VEGETABLE GARDEN.

THE vegetable garden is one of the most important of all the departments of horticulture. As it is one of the principal sources from which we are to draw our daily supply of food, it is essential that we bestow a large share of our attention and care on this subject.

Our health depends upon our digestion: this, however, is readily disturbed by some articles of diet, which are impure or badly prepared, especially in persons of a feeble constitution. This is the more remarkable when these vegetables are badly cooked, and they have to bear the blame of being un-

wholesome, while censure should fall upon those by whom they have been improperly prepared. Vegetables are frequently proscribed, especially during the prevalence of an epidemic. Is this right? Are vegetables unwholesome? If so, how does it happen that so many persons with feeble powers of digestion, are compelled to confine themselves to vegetable diet? The importance of proper cultivation and proper preparation, however, does not appear to be duly appreciated, except it be by some intelligent valedudinarians; the common observer does not realize the possibility of a vegetable having richer properties, when grown in a soil that possesses every ingredient required by the plant for its perfect development, than if it had been produced by a barren soil destitute of, or at least deficient in, some of the necessary elements. As with animals, so with plants; they must have a proper supply of their necessary food, else they cannot pos-

sess their requisite qualities, nor will they be nourishing as food. In the one case, the lean flesh attracts attention and is rejected, but the vegetable does not so strikingly manifest its starvation, and its deficiencies are not suspected though they be as great in reality. People cannot be too strongly urged to look to this matter, and having the articles properly produced, the next thing will be to see that they are suitably prepared for table. If it be bad policy to purchase vegetables that have been badly grown, simply because they are cheap if, when we are so fortunate as to procure those which are really good, being possessed of all their peculiar ingredients, furnished by judicious cultivation, it will be far worse to have them ruined by the ignorance so common among cooks. The scientific gardener is then blamed for the faults of others.

JAS. STEWART.

Memphis, Tenn.

Culture of the Chrysanthemum.

It has been acknowledged by all who have witnessed the Chrysanthemum exhibition of the Norfolk and Norwich Horticultural Society, that in no county in England is this beautiful autumnal flower exhibited in a higher state of perfection, than in Norfolk, and having received numerous letters of inquiry respecting the mode of cultivation pursued, we have taken advantage of your columns in giving publicity to the same. We do not wish it to be understood, that every exhibitor pursues this precise method of treatment, but it is such as we ourselves adopt, and we venture to say, that if carried out, it will insure dwarf plants from 1½ to 2 feet high, covered with rich, dark green foliage, and carrying blooms from five to seven inches in diameter. In the last week of May we select the tops of the strongest shoots for cuttings, putting four or five round the edge of a three-inch pot, and placing them in a gentle warmth; when rooted, they are potted singly in the same sized pots, and kept in a

close frame for a few days, until they have become established; the tops may then be pinched out, leaving five or six joints for lateral shoots; after a few days' hardening off, they are then removed to an open situation, allowing the plants a sufficient distance from each other to prevent their drawing, care being observed that they do not suffer for want of water. About the third week in July, we shift for blooming into seven-inch pots, using a small handful of coarsely broken bones at the bottom. The soil we use consists of equal parts of well decayed leaves, (one year old) pig manure, turfy loam, and leaf mold, adding half a barrowful of peat, and half do. of road drift, to every four barrows of the above. When potted they are placed in rows two feet apart, and they require but little attention, except watering, for two months; at the expiration of this period we commence watering twice a week with liquid manure made from one bushel of fresh pig manure, (free from straw) to about eighty gallons of,

water; this will be ready for use in two or three days. As soon as the plants show flower-buds, we tie each shoot to a stick, and train them fan-shaped. Disbudding ought now to be attended to, reserving only one, or at most, two, at the top of the shoot; but where two are left, it is better to take out the second bud and leave the third, to prevent confusion. As soon as the buds show color,

the plants are then removed to the green house or conservatory, giving plenty of air, and substituting water for liquid manure. We ought to have mentioned, that where a profusion of bloom is required, two or three plants may be inserted in the pots, where only one is usually grown; this will afford an opportunity of cutting away the weakest shoots, and reserving the strongest only.

INFLUENCE OF THE LAKES.

THE first frost experienced at our place this autumn was on the night of the 29th of October. Up to that date Dahlias, Verbenas, Lima Beans and other tender plants, were thriving in the highest state of vigor and perfection. Among the consequences of this delay of frost, is the ripening of buds and wood of fruit trees and half-hardy shrubs, which prepares them to resist the cold of the ensuing winter. The leaves of the peach and cherry trees, and of the various Chinese Magnolias, had previously matured, and were dropping before the occurrence of the frost.

During winter, the temperature of this immense body of water, remaining at about 40° of Fahrenheit, moderates the severity of the cold, and it is rare that the thermometer on the Lake shore, falls to zero, while in the middle portions of the State it is down to 8, 10, 12 or more degrees below that point.

Again, during spring the lake and its investing body of ice, serve to keep the weather cool and vegetation passive. At length, when summer sets in, vegetation rushes forward with a rapidity unequalled in the more southern portions of the country, and by the middle of July, fruits and garden vegetables are only one or two weeks behind similar kinds at Columbus. The result of all this is, that the climate of Cleveland and its vicinity is best adapted for the raising of fine fruits and vegetables of any in the Western country.

It is, however, fair to state that there are two drawbacks that are felt by our horticulturalists in this locality.

First, our soil though warm and easy of cultivation, is naturally destitute of some very essential elements, Labor, expense and perseverance, will, however, correct this evil. *Second*, there is a less quantity of rain that falls on the lake shore, than in the interior of the State, especially during the months of June, July and August, in which it is needed to give the size and flavor to our fruits and advance the progress of culinary vegetables.

The extensive evaporations arising from the surface of the Lake, pass over to the south, before they condense and fall in the form of rain in summer and snow in winter. A range of high grounds, forming the summit between the waters of Lake Erie and the Ohio river, is the point where these evaporations first are arrested and begin to fall. Medina, Akron and Burton, are more favored with showers during the months just named, than Cleveland, and during winter frequently enjoy sleighing, when not a flake of snow is to be seen in the vicinity of the Lake.

The moist winds blowing off the Lake, during summer in part supply the requisite fluids; and our vegetation will often thrive for weeks, during severe droughts, from supplies derived from this source, and taken up principally through the medium of the leaves.

We learn that heavy frosts were experienced over most parts of Ohio as early as September 25.

J. P. KIRTLAND.

Family Visitor, Nov.

CINCINNATI HORTICULTURAL SOCIETY.

THE doings of this society shall in future occupy an important place in the pages of the Review, that is, a place proportioned to the importance of their acts. During the winter, the meetings have been kept up with considerable interest.

The examination of wines offered for the prizes, was had on the 7th of December, when a Diploma and money premium were awarded to John Williamson, of New Richmond, for the best specimen of Catawba wine of the vintage of 1849, but the silver cup worth \$25, offered for the best wine from a cask containing at least thirty gallons, was awarded to Thomas H. Yeatman, and the second premium was given to Sebastian Rintz. Good displays of fruits and specimens of wine have been presented at almost every meeting, and sometimes beautiful flowers—and among other vegetables the finest salads—and cauliflowers.

Toward the close of the year, an elaborate revision of the schedule of premiums was made, and a prize list was adopted, offering liberal rewards to encourage competition, which must bring out fine exhibitions the coming year. This was printed in the Horticultural Advertiser, and issued with the fourth number of the Review.

At the annual meeting, on the first Saturday in January, an election was held at which the following officers were selected for the ensuing year:

A. H. ERNST, President.

WM. RESOR,	} Vice Presidents.
M. S. WADE,	
N. B. SHALER,	

JNO. A. WARDER, Recording Secretary.

GEO. GRAHAM, Corresponding Secretary.

WM. RESOR, Treasurer.

Executive Council—Jno. P. Foote, M. McWilliams, Wm. Orange, S. S. Jackson, G. Sleath, Jos Longworth, and S. Mosher.

STANDING COMMITTEES FOR THE YEAR.

Fruits—M. McWilliams, M. S. Wade, S. M. Carter, Wm. Orange, Jno. G. Anthony.

Flowers—N. B. Shaler, Jas. Hall, Rob't. Neale, Chas. Patton, Thos. Salter.

Vegetables—Jno. P. Foote, A. Worthington, Rob't. M. Moore, Geo. Graham, Henry Ives.

Library—Jno. P. Foote, Jno. A. Warder, Jno. G. Anthony.

The wine committee is not yet appointed, but the whole subject of rules and regulations is to be considered at the monthly meeting on the first of February, and some changes of policy in this important subject may be effected.

To Correspondents.

PATIENCE good friends—don't scold at the want of punctuality in the issue of this work—it was never promised at the beginning, nor on the first day of the month. The valuable meteorological table requires some delay, and the engagements of his profession must occasionally interfere with the prompt preparation of the matter by the Editor—but besides all this, there are many different parties among whom the responsibility of a punctual issue must be divided.

J. S., of Memphis, has suggested that a monthly calendar of garden operations should be inserted in each number of our work. This proposition at first, met with some favor, but more mature reflection has convinced me that, for the present, at least, it had better be omitted—the principal reasons, are:

1st, That our circulation is so wide in its extent that it would be impossible to provide for the wants of all readers north and south—the latter being blessed with verdure while the former are still enveloped in snow and ice.

2d, No gardener will be without a calendar, which he may obtain at any seed store

for a trifle, and, what is better still, a judicious gardener, whether on a large or small piece of ground, will keep a record of his own operations, with remarks upon the success or failure of every experiment, and this becomes, for him, the most valuable of all calendars, to guide him in future years.

It is always a subject of regret to the Editor, when he is obliged to put off the publication of an article furnished by any of his valued contributors. This is particularly the case in the present and last numbers—an article "Additional Notes on Vineries," was accidentally omitted from the January issue, though set up in type—and now "a Chapter on Trees," is not inserted because of deficient space, and the type being employed.

Correspondents and contributors will confer a favor upon the Editor, by sending in their articles as early in the month as possible.

Notices and Acknowledgments.

THE Editor begins to feel that his Review is properly appreciated by his brethren of the tripod, who are flocking in with their offerings of exchanges and complimentary notices. Some of these are highly valued—especially the old standard works, "The Magazine of Horticulture," and "The Horticulturist."

The latter appears in a new *color*, a delicate buff cover, from which it must not be inferred, that Mr. Downing has deserted "his colors," but that he has effected a "peaceful revolution," all right, in this age of progress. The shape of the matter is changed also, the original articles being set across the page without a division into columns. With regard to the matter itself, any praises would be superfluous, where all is so good, and universally acknowledged to be excellent.

THE *Valley Farmer*, of St. Louis, fills up another link with the West, which is welcomed here, while the *American Agricultu-*

rist, of New York, is equally so, from the East, as is the *Michigan Farmer* from the North. The *Maine Farmer* and *Boston Rambler* are agreeable messengers from the further East, but why have no missives arrived from the great center of the empire State? Moore's excellent paper comes alone. The *Genessee Farmer* has never placed itself in the category of an exchange, despite assiduous courtships; although the *Albany Cultivator* comes regularly from the headquarters of that state, and brings in its train a beautiful and well illustrated Farmer's Almanac.

SPARKLING CATAWBA.

THE following elegant extract is clipped from the January number of the *Knickerbocker*, and it is well that the editor of that raucy periodical has thus publicly stated that neither he nor any of his friends had ever seen Mr. L., or we might be tempted to suppose that he was hunting the *cozenship*, to which by his *knick*-name he may feel entitled to lay claim with our Nicholas Longworth. Be that as it may, I cordially unite with him in all that he has said about our wines and wine maker; would that all indorsements were as safe! When will *Knick* come out to see for himself, that it is "something to *live* in Cincinnati;" that would be better than stretching his neck to the greatest longitude of any crane living; instead, he might the more frequently titillate his palate with Catawba, both *still* and *sparkling*.

MR. LONGWORTH, of Cincinnati, is a man to be honored for his proverbial liberality and his broad and general public spirit. We never saw him, nor of our friends, do we know of any who have ever mentioned to us that *they* had seen him; but we honor him for his well known love of art, and his patronage of artists; for the perseverance, unchecked by difficulties, with which he has labored to introduce into our country the cultivation

of products supposed to be confined in their growth to foreign lands; and for the wise forecast which enables him to see in the distance, and prompts him to be prepared to meet and overcome at hand, the objections of croakers and the opposition of the interested. The successful culture of various grapes, and the manufacture of superior native wines from them, will hereafter make the name of Longworth one to be mentioned with pride by his countrymen; as will that of Junius Smith, now assiduously laboring for, and patiently awaiting, at the South, the fruition of his hopes in regard to the culture of tea in *his own, his native country*. Already, with the aid of Fournier, who is thoroughly "grounded" in the manufacture of the best fermented

wines abroad, Mr. Longworth has sent out a few samples of a wine, which we hesitate not to say can not be, and has not been, exceeded in our market. For fruitiness; for delicacy and richness of taste, for that quality "which cheers but not inebriates;" for that flavor which regales the palate after the wine has passed the "throat and the oesophagus," commend us to "*Longworth's Sparkling Catawba*." It seems to us "outside barbarians," at this distance, something to *live* in Cincinnati to be accessible to it. One has only a single wish, either in the enjoyment or the remembrance of it; and that is, that he had been blessed with the neck of a crane, and that he might have prolonged the taste of so delicious a beverage.

A FLOWER IN YOUR ROOM.

A fire in winter, a flower in summer! If you can have a fine print or picture all the year round, so much the better; you will thus always have a bit of sunshine in your room, whether the sky be clear or not. But above all, a flower in summer!

Most people have yet to learn the true enjoyment of life; it is not fine dresses, or large houses, or elegant furniture, or rich wines, or gay parties, that make home happy. Really, wealth cannot purchase pleasures of a higher sort; these depend not on money, nor money's worth; it is the heart, and taste, and intellect, which determine the happiness of men, which give the seeing eye and the sentient nature, and without which man is little better than a kind of walking clothes-horse.

A snug and clean home, no matter how tiny it be, so that it be wholesome; windows, into which the sun can shine cheerily; a few good books, (and who need be without a few good books in these days of universal cheapness?)—no duns at the door, and the cupboard well supplied, and with a flower in your room!—there is none so poor as not to have about him the elements of pleasure.

Hark! there is a child passing our window calling "wall flowers!" We must have a bunch forthwith; it is only a penny! A shower has just fallen, the pearly drops are still hanging on the petals, and they sparkle in the sun which has again come out in his

beauty. How deliciously the flower smells of country and nature! It is like summer coming into our rooms to greet us. The wall flowers are from Kent, and only last night were looking up to the stars from their native stems; they are full of buds yet, with their promise of fresh beauty. "Betty! bring a glass of clear water to put these flowers into!" and so we set to, arranging and displaying our penny worth to the best advantage.

But what do you say to a nosegay of roses? Here you have a specimen of the most beautiful of the smiles of nature? Who, that looks on one of these bright full-blown beauties, will say that she is sad, or sour, or puritanical? Nature tells us to be happy, to be glad, for she decks herself with roses, and the fields, the skies, the hedge-rows the thickets, the green lanes, the dells, the mountains, the morning and evening sky, are robed in loveliness. The "laughing flowers," exclaims the poet! but there is more than gayety in the blooming flower, though it takes a wise man to see its full significance—there is the beauty, the love and the adaptation, of which it is full. Few of us, however, see any more deeply in this respect than did Peter Be!

"A primrose by a river's brim,
A yellow primrose was to him,
And it was nothing more."

What would we say or think of any one

who had invented flowers—supposing that before him, flowers were things unknown?—would it not be a paradise of new delight? should we not hail the inventor as a genius, as a god? And yet these lovely offsprings of the earth have been speaking to man from the first dawn of his existence till now, telling him of the goodness and wisdom of the creating power which bade the earth bring forth, not only that which was useful as food, but also flowers, the bright, consummate flowers, to clothe it in beauty and joy!

See that graceful Fuchsia, its blood red petals, and calyx of bluish purple, more exquisite in color and form than any hands or eyes, no matter how well skilled and trained, can imitate! We can manufacture no colors to equal those of our flowers in their bright brilliancy—such, for instance, as the Scarlet Lychnis, the Browallia, or even the common Poppy. Then see the exquisite blue of the humble Speedwell, and the dazzling white of the Star of Bethlehem, that shines even in the dark. Bring one of even our common field flowers into a room, place it on your table or chimney piece, and you seem to have brought a ray of sunshine into the place. There is ever cheerfulness about flowers; what a delight are they to the drooping invalid! they are like a sweet draught of fresh bliss, coming as messengers from the country without, and seeming to say:—"Come and see the place where we grow, and let thy heart be glad in our presence."

What can be more innocent than flowers? Are they not like children undimmed by sin? They are emblems of purity and truth, always a new source of delight to the pure and the innocent. The heart that does not love flowers, or the voice of the playful child, is one with which we should not like to consort. It was a beautiful conceit that invented a language of flowers, by which lovers were enabled to express the feelings that they dared not openly speak. But flowers have a voice to all—to old and young, to rich and poor, if they will but listen, and try to interpret their meaning. "To me," says Wordsworth,

"The meanest flower that blows, can give
Thoughts that often lie too deep for tears."

Have a flower in your room, then, by all means! It will cost you only a penny, if

your ambition is moderate; and the gratification it will give you will be beyond all price. If you can have a flower for your window, so much the better. What can be more delicious than the sun's light streaming through the flowers—through the midst of crimson fuchsias or scarlet geraniums? Then to look out into the light through flowers—is not that poetry? And to break the force of the sunbeams by the tender resistance of green leaves? If you can train a nasturtium round the window, or some sweet-peas, then you have the most beautiful frame you can invent for the picture without, whether it be the busy crowd, or the distant landscape, or trees with their lights and shades, or the changes of the passing clouds. Any one may thus look through flowers for the price of an old song. And what a pure taste and refinement does it not indicate on the part of the cultivator!

A flower in your window sweetens the air, makes your room look graceful, gives the sun's light a new charm, rejoices your eye, and links you to nature and beauty. You really can not be altogether alone, if you have a sweet flower to look upon, and it is a companion which will never utter a cross thing to anybody, but always look beautiful and smiling. Do not despise it because it is cheap, and every body may have the luxury as well as you. Common things are cheap, and common things are invariably the most valuable. Could we only have fresh air or sunshine by purchase, what luxuries these would be; but they are free to all, and we think not of their blessings.

There is, indeed, much in nature that we do not yet half enjoy, because we shut our avenues of sensation and feeling. We are satisfied with the matter of fact, and look not for the spirit of fact, which is above all. If we would open our mind to enjoyment, we should find tranquil pleasures spread about us on every side. We might live with the angels that visit us on every sunbeam, and sit with the fairies who wait on every flower. We want some loving knowledge to enable us truly to enjoy life, and we require to cultivate a little more than we do the art of making the most of the common means and appliances for enjoyment, which lie about us on every side. There are, we doubt not, many who may read these pages, who can

enter into and appreciate the spirit of all that we have now said; and, to those who may still hesitate, we would say—begin and experiment forthwith; and the first of all, when the next flower girl comes along your street, at once hail her, and—Have a flower in your room!—*Eliza Cook's Journal*.

Planting Fruit Trees for Others.

The Spaniards have a maxim, that a man is ungrateful to the past generation that planted the tree from which he eats fruit, and deals unjustly towards the next generation, unless he plants the seed, that it may furnish food for those who come after him. Thus when a son of Spain eats a peach or pear by the road side, wherever he is, he digs a hole in the ground with his foot, and covers the seed. Consequently, all over Spain, by the road sides and elsewhere, fruit in great abundance tempts the taste and is ever free.

Let this practice be imitated in our country, and the weary wanderer will be blest, and will bless the hand that ministered to his comfort and joy. We are bound to leave the world as good or better than we found it, and he is a selfish churl who basks under the shadow, and eats the fruit of trees which other hands have planted, if he will not also plant trees which shall yield fruit to coming generations.—*American Phren. Jour.*

Don't forget that the Horticulturists and the Agriculturists of the Western States have set up a claim for a share in the management of the AGRICULTURAL BUREAU recommended by our good President Fillmore, and which it is sincerely hoped will be established by our rulers in the other department of government.

Trusting that the readers of these pages will agree with the Editor in his suggestions on this subject, he refers them again to this topic, as introduced to their notice on page 192, in the 4th number. It is not the *man* nor the *politician* that is so much urged upon your attention as the kind of man. There may be others than our friend Kinnicott, who would be well qualified for the task, but the article in the last number expresses the honest views of the Editor.

METEOROLOGICAL TABLE.

CINCINNATI, JANUARY, 1851.

THERMOMETER.			WEATHER.			RAIN.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.	
1	19	35	clear	clear	clear	
2	27	38	do	do	do	
3	28	33	do	variable	do	
4	31	34	cloudy	cloudy	cloudy	
5	29	44	clear	clear	clear	
6	35	53	do	do	do	
7	36	39	cloudy	cloudy	cloudy	
8	32	44	variable	do	do	
9	54	58	clear	clear	clear	
10	35	36	cloudy	cloudy	cloudy	
11	32	44	do	clear	clear	
12	37	46	variable	do	cloudy	
13	36	44	clear	do	clear	
14	33	58	do	do	do	
15	49	58	cloudy	do	cl'y, rain	.20
16	49	63	variable	do	do	
17	21	24	clear	do	clear	
18	10	20	do	do	do	
19	15	37	do	do	do	
20	36	45	do	do	do	
21	22	46	do	do	do	
22	48	50	rain, cl'y	variable	variable	.15
23	32	48	fog, clear	clear	clear	
24	31	53	do	do	do	
25	31	57	clear	do	do	
26	35	60	do	do	do	
27	37	44	fog, clear	do	cloudy	
28	43	56	rain	cloudy	do	.30
29	13	20	cloudy	clear	do	
30	3	10	clear	do	clear	
31	2	19	do	do	do	

Rain in the month, Inches.....00.65
No snow to cover the ground.

Mean temperature of the month.....36.38

Do do Jan. 1850.....37.07

Do do do 1849.....32.73

Do do do 1848.....39.03

Do do do 1847.....31.64

Do do do 1846.....39.15

Do do do 1845.....43.10

Do do do 1844.....34.40

Mean of Jan. in the above 8 years....36.68

Clear days in the month.....18

Variable (sun-shine at times).....9

Cloudy (sun not visible).....4

REMARKS.—Calm 4 days.

Light winds and calms, more or less, in 25 days.

Brisk breezes on a portion of 7 days.

High winds on a part of the 9th, and night of the 28th. No storm in the month.

This month has been remarkably dry and pleasant; much clear weather, rendered the more agreeable by so large a portion of calms and light winds. It took its leave coldly, but brightly.

JOHN LEA.

CORRECTION.—The total of rain and melted snow in the Meteorological Table for December, shows too great an amount—instead of 7.10, read 5.62.

Univ. of
California



Drawn on Stone by A.P. Genereux.

RESIDENCE OF JES. LONGWORTH ESQ.



VOL. I.

MARCH, 1851.

No. 6.

ROSES.

In every age of the world since dawning civilization first modified the rude barbarism of savage life, lovers and poets, whether vocal or silent, have admired the rose. It has been the theme of many an ode and sonnet; and when not itself the theme it has been introduced as an important adjunct to the flowery verse by poets, in every country, so that volumes would be required to contain all the verses which refer to this constant favorite—the Queen of Flowers. None of Flora's choicest gems have been so frequently addressed by poesy, nor so often invoked to point a moral and adorn a tale. This being the case, it might be inferred that all the poetry had been already extracted from it; but it is not so—a perennial spring flows with the sweet odors of the rosy petals. Do not anticipate, gentle reader, that the subject is now to be presented in any such light by your prosaic friend; he has nothing but practical sober facts to bring before you, nor would he have attempted a subject that so naturally induces anticipations of a poetical effusion, had it not been that so many inquiries are constantly made by friendly readers and correspondents, respecting this tribe. He feels forced to gratify them with an attempt to answer their queries, by this hasty

glance at the family that claims so large a share of the attention of every person who wishes to plant or to enjoy the planting of others. As some years' culture has taught a little practical experience, which may be useful to amateurs, the result, though a very epitome, is herewith presented for their especial benefit.

One thing rather remarkable in the history of the rose is the limited number of its species, and its having under the culture of man produced such an endless number of varieties. These last have, in many instances, resulted from the accidental crossing of neighboring species and varieties; in other cases they have been produced by the judicious and well-directed efforts of scientific gardening, which has transformed the single wild rose into the varied display offered in every garden, but which is a small part of the thousands that have names as distinct varieties.

Think not, however, that all wild roses are single. The readers of the Review have been already introduced to one which was found to be double upon the wild plains of the Kansas in the western portion of Missouri; one of the same character and class, called Mountjoy, and is supposed to have been native on the banks of the Licking river

—and our lamented townsman, the late Dr. F. Worthington, discovered another in the plains of Ohio, to which his name has been attached.

The almost infinite variety of roses has been produced by crossing the several species and varieties together. This has in many instances occurred accidentally, from mere proximity, but it is well known that since the days of Mr. Knight, great attention has been bestowed upon the subject of hybridizing, and that scientific efforts have been brought to bear upon the subject of crossing different varieties of various classes of plants, so as to produce new forms and combinations of excellence or desirable qualities. Accidental impregnation, no doubt, produced the parent of the Bourbon class—the same is true of the modern race of double Prairie roses in our own country, many of which are so beautiful and justly so much admired,—this will be seen by reference to the article upon Prairie roses in a preceding number of this work. Among these we may hope, before long, to have the pleasure of making the acquaintance of Ma-an-ga, as a zephyr from the further west coming in maiden bashfulness to claim her position among those already in cultivation, and so much admired for their beauty.

One of my earliest recollections among this truly exquisite family of plants, was a double wild rose, then considerably cultivated about Philadelphia, under the name of the Pennsylvania rose, which bore a considerable resemblance to the Rosa, and which was reputed to be a wild rose; it bloomed occasionally through the season, and was very fragrant.

The hybridizing process is very captivating to one who is a lover of roses and a successful cultivator, as it affords him an opportunity of testing the combining affinities of different families, and allows him to study the

strong traits of each variety upon which the experiment is tried; but it requires a great exercise of patience, and too often needs an endurance under disappointment to which all men will not submit. It will be scarcely necessary to say that the plant selected for seed-bearing should not be too double, and must have all the anthers clipped off before the pollen has burst, and then the farina is to be brought from a full-blown flower of the variety whose peculiar properties it is desired to engraft upon the first. A great deal of time is required to grow the seeds, and after waiting years for the bloom, disappointment often results.

The classification of Roses, in consequence of the many crosses that have taken place, has become quite an intricate affair; but as some arrangement is necessary among the many thousands which are in cultivation, I shall, without pretending any originality, attempt to make out one which may serve as a guide. The refinements of some who have written upon this subject, have subdivided the classification to such an extent that it is difficult sometimes to say to which of the families many belong.

The old hardy June rose, blowing but once in a year, formed a class that was well known, embracing the Provins, the Damask and its subordinate divisions of Moss, Briar, Eglantine, etc. I call these rough roses.

A subdivision of some importance grew out of the Damask, some of which bloomed in the autumn, and their exquisite fragrance gained them many admirers.

The ever-blooming or Chinese rose, was quite a different affair—it was the true *perpetual*, and with its smoother bark and foliage, it constituted a very distinct class. These two were the only known classes on the Isle of Bourbon, where they were much used as hedges, when a peculiar plant was one day observed, which possessed the prop-

erties of both, being smooth in bark and leaf, and of robust habit and perpetual bloom. This was the first Bourbon rose, called Jacques, and from it as a progenitor, has proceeded the bright and beautiful family of Bourbon roses. Accidentally or otherwise, several crosses were afterwards effected, which resulted in another class, remarkable for their shining leaves and very beautiful flowers;—these are called the Hybrid China roses, many of them are of exquisite beauty, and they are necessary to every collection.

The Tea and China roses were much improved by judicious cultivation and crossing, and among them are some of the most magnificent specimens of the whole family; they possess a peculiar fragrance which is much admired by some connoisseurs. Cultivation and crossing has produced an almost endless variety of these, which I shall call the *smooth* leaved roses, one division of which—the *Noisettes*—are remarkable for their blooming in clusters, and some among them are of extraordinary size and beauty.

The Fall blooming damasks were improved and multiplied until they constituted a class called Perpetual damasks, which were very much prized, and many are still in vogue and cultivated for their beauty and fragrance of flower, but they are generally of poor growth and indifferent foliage. They were often used as parents from which to raise seedlings, by crossing or hybridizing with the smoother and more brilliant and prolific Teas and Bourbons, to produce another variety, combining the good properties of Damask, Bourbon, and China. Hence arose a new class called the Hybrid Perpetuals, combining many excellencies of the several families. To these the French applied the term *Remontant*, or springing again, as they generally do through the summer and autumn, and the shoots frequently crowned with sweetest roses. This term *Remontant* is now applied

to them, and the class is made to include the old Perpetuals, which may be considered Remontants, though not Hybrid-perpetuals. To this class another subdivision may be added, the Hybrid-Bourbons, which are separated by some authors, but which generally belong to this category. One of the most beautiful of these is the *Geant des Batailles*.

The Climbers are a very beautiful and remarkable family of roses, though somewhat miscellaneous in their characters; all are noted for their rampant growth and profusion of flowers. They all probably sprang from the Chinese multiflora, from our native wild Prairie rose, the *Sempervirens*, the *Ayrshires* and *Boursalts*. One must be struck with the resemblance to the first, which is borne by the *Grevilla*, and by *Laura Davoust*, these three are alike in wood, leaf, flower, habit, and in being tender, for in this neighborhood there is no certainty in preserving the bearing wood of either through the winter. They are of course not highly esteemed for out-door culture, to which, by their rampant growth, they are peculiarly adapted. The multitude of perfect little flowers on the Chinese multiflora would, if hardy, render it a universal favorite, and the *Laura Davoust* must be acknowledged to be one of the prettiest things in the rose family, when presenting a thousand perfectly double flowers. The *Grevilla*, or seven sisters, with its varied hues, is admired by some, but not half so great a favorite with me as its congener, *Russell's Cottage*, which is perfectly hardy.

All climbing roses must yield the palm, however, to the Prairie tribe, which have been so improved of late years as to give great variety of tints with vigorous growth and entire hardiness, they are the best of all this class. The *Boursalts* are thrown quite in the shade, they will now only be grown for their brilliancy in the mass and earlier bloom; the separate flowers are mean in appearance

The Ayrshires also are too poor in their petals, and too slender in their foliage to be much longer the favorites they were once considered; for pillars, however, as distant objects, they will be much admired by all those who have beheld them well grown.

PREPARATION AND CULTURE.

To succeed with any of the rose family, as indeed with any other plants, it is necessary to make a thorough preparation for the reception of the roots. It may look very pretty to behold a rose bush at every cabin window, and there is no reason why we should not have that enjoyment; but you need not suppose that a rose, any more than a grape vine, "will grow anywhere, or in every soil." Both plants are very gross feeders, and need attention just in proportion to the exceedingly generous return they are ever ready to yield to the hand of the liberal cultivator.

For the greatest perfection of growth and bloom, it is necessary to dig or trench the soil thoroughly, and to manure highly. If the earth be not naturally rich, it may be best in some instances to excavate it entirely, to the depth of two or three feet, and to fill the bed or border with prepared compost, which may be made of rotten sods, road scrapings, wood-earth or leaf-mold, with a goodly proportion of manure of almost any kind, the richer the better; but most roses seem to prefer a soil that is rather stiff. Some that are of feeble growth and indifferent bloomers, in the rich potting mold of a greenhouse, will grow remarkably well in a stiff, strong clay soil.

If your ground be at all retentive of moisture, from its tenacious clay sub-soil, it will be necessary to provide thorough drainage at the bottom of the excavation, when preparing a bed. This can be effected by cutting a trench from the lowest portion, and laying a drain, and by filling in the bottom of the bed with rubbish of almost any kind,

bones, stones, or even branches of trees, before filling in the compost.

Some may think that all this trouble is unnecessary for a parcel of out-door roses, and that it is not worth while to spend so much labor on a rose, or a rose-bed. Let such a one ask himself whether he wants his plants to last two or three years, and then to dwindle and die, making them biennials, or whether he would prefer to have his rosary a perennial glory and charm through many succeeding years—if the latter, then it will be quite worth the toil of a suitable preparation—and even then it will be necessary to continue his kindly attentions, not only in trimming and training, but in keeping up the supply of nourishment by repeated manuring at the surface; a good layer of manure during winter will greatly aid in protecting the roots from the injurious effects of winter's frosts, and frequent applications of liquid manure during the summer, will lighten the tints, and increase the perfume of the more abundant bloom appropriate to this period of the year, when the plant is taxed to the utmost.

Many persons have not supposed any preparations necessary, having been assured, and having observed for themselves, that "a rose would grow anywhere," and after a few years they have discovered, that the plants, though at first vigorous, became poor and dwarfish, and badly furnished with flowers;—such may restore the thriftiness of their plants by proper care, such as digging out a space around each rose tree, one or two feet deep, and replacing the exhausted earth with rich compost.

The culture should consist of a thorough breaking up of the soil, at least once in the year, and this had better be done in the winter season, so as to reap the advantage of the frost, and also to avoid disturbing the roots when the plant is growing.

Old plants may thus be quite renovated, and if they have begun to decay, they may

be dug up, and the soil entirely changed for fresh compost or virgin soil, when, if replanted, they will immediately take a new lease of life, and be quite rejuvenated.

I had intended devoting a page or two to the subject of propagation by cuttings, layering and suckers, or to the more artificial methods of grafting, budding and inarching, each of which several processes has its advantages in different kinds of roses; but have concluded to postpone that branch of the subject to another occasion, when its importance will entitle it to a separate article. Besides, some practical correspondent may be induced to take it up and present the claims of the different plans, and the excellencies of the various stocks.

This long lesson shall be brought to a close with a short list for a small selection of choice roses in each of the leading classes.

In making a select list for the amateur, it is exceedingly difficult to know which to reject where all are so beautiful, or have some peculiar excellence to recommend them.

The following sorts have been chosen under each subdivision respectively, so as to secure the greatest variety of color, in combination with blooming properties, form and fragrance—all of them have been thoroughly tested :

REMONTANTS.

La Reine, with its magnificent large and perfect flowers, is always one of the first.

Prince Albert, remarkable for its deep tints, fine form, and exquisite fragrance.

Madame Laffay, with delicious perfume and beautifully imbricated form.

Geant des Batailles, of brilliant color and profusion of flowers.

Marquis Bocella, profuse in flowers of a pale rose, sometimes approaching white.

Stanwell's Perpetual, an abundant bloomer, with delicate blush flowers becoming white and very fragrant.

BOURBONS.

Souvenir de la Malmaison, which should have been styled *the queen*, perfect flowers, well cupped, very double and abundant.

Hermosa, beautifully imbricated and very pretty—a universal favorite.

Leveson Gower, magnificent, large, stiff petalled and highly praised by all.

Paul Joseph, exceedingly dark, rich, full, and an abundant bloomer.

Acidalie, nearly white, of beautiful form, rather tender.

Madame Desprez, thrifty, a profuse bloomer, and every body's favorite, and though very double, rather undecided in its color.

CHINA AND TEA.

Triumph of Luxembourg, flowers buff-rose, of immense size and great beauty; strongly tea-scented.

Bougere, very large and double, of a rich bronzed rose-color; tea-scented.

Louis Philippe, a free bloomer, cupped, dark rose with paler petals within.

Eliza Sauvage, double, large, tea-scented pale yellow; it sometimes rivals *Chromatella* in depth of the yellow tint.

Purple Crown, the most brilliant and beautiful of all the deep-red varieties.

Pink Daily, an old but admired sort, not very double, but compensating by the beauty and profusion of its buds; it is every-body's favorite.

Devoniensis, very beautiful and large, cupped, of a fine creamy white; tea-scented.

NOISSETTES.

Chromatella, a strong grower, flowers very large, regular, of a rich, bright yellow—better than *Solfaterre*, which it much resembles.

Lamarque, luxuriant, like the two preceding, must have their strong shoots trimmed off as they start, after obtaining a good cane, as they blossom best on the old wood; they are all beautiful.

Euphrosine has been too much overlooked; though not very double, it is a beautiful pale rose and very fragrant,—tea-scented.

Fellenberg, a profuse bloomer of a dark color, a very brilliant object at a little distance.

Aimée Vibert, the most beautiful of the family, its pure snow-white flowers being very double, regular and appearing in clusters.

Ophire grows freely and blooms well; it is quite a favorite with some on account of its peculiar buff color, of varying tint, sometimes almost a bronze.

HYBRID CHINA.

These form a class of hardy June roses, which are great favorites, although they blossom but once a year; they are remarkable for their fine glossy foliage, and splendid flowers.

George the Fourth has long, slender shoots which produce wreaths of flowers of the darkest crimson, large and very showy.

Brennus, a vigorous growth and superb crimson flowers cause this rose to be much admired; like *Geo. IV.*, it should never be much shortened in, but in trimming, the shoots should be thinned out.

Lady Stuart is fragrant, cupped and very beautiful, of a pale blush, with round buds.

Bonne Ginneure, tall, a profuse bloomer, very double, brilliant crimson with a violet tint, a great favorite.

Amy Robsart, dark, rich velvety flowers, appearing in great abundance.

Cerisette, beautiful cherry red, free bloomer, and a brilliant object; growth slender, when compared with some others.

Boul de Neige, a creamy white, very double, globular and exceedingly pretty.

HARDY JUNE AND MISCELLANEOUS.

Including Mosses in variety, but the best are *Carnea*, the *Old Red*, and *Princesse Adelaide*, which furnish the most perfect buds of the whole Rose family.

Nest Cabbage, which is perfectly cupped and very fragrant—an old favorite.

Persian Yellow, the most brilliant of all yellow roses.

Unique, or *Madame Hardy*, the favorites among white roses.

Microphylla rubra, which is the best of this curious class, very double and blooms through the season,—violet roses.

Macartney alba adorata, sometimes very beautiful.

CLIMBERS.

The best of which are the *Prairie rosea*, or *Rubifolia*; of these the Queen of the Prairies, with its magnificent wreaths of splendid flowers, is the universal favorite.

Baltimore Belle, beautifully tinted, almost white, a profusion of blossoms and buds which are very pretty.

Mrs. Hovey, very lovely—nearly white.

Pallida or *Superba*, of a delicate blush.

Laura Daroust, one of the Multiflora family, is very regular, double and beautiful, but not always able to endure our changeable winters.

Purple Boursalts, which should be kept in the back ground, where a profusion of brilliant flowers would be attractive especially if beheld at a distance.

This selection is necessarily very imperfect, for the reasons above stated. Some persons, most familiar with this interesting family, will be very likely to find fault with some of the old-fashioned favorites here introduced, and others will wonder that the list does not contain all of the newest varieties—it is at best, but a guide for beginners, and embraces kinds that may be obtained at almost any garden. My own choice would have been to have selected the whole from the Remontants and Bourbons, which are hardy, fragrant and beautiful, and will furnish a constant succession of lovely flowers, if you have plenty of specimens.

MITCHAM; ITS PHYSIC GARDENS.

HENBANE.

In the notices of the Mitcham physic gardens by Lysons, Malcolm and others, no mention is made of Henbane. We may, therefore, infer, that its cultivation at Mitcham is comparatively modern.

Two varieties of henbane, (*Hyoscyamus niger*, Linn.) are cultivated by the herb growers at Mitcham, the biennial and the annual. Var. *a biennis*, biennial black henbane. The plants of this variety are stronger, more fully developed and branched, more clammy, and possessing in a higher degree the downy character and peculiar odor of the plant. The leaves are deeply incised and the flowers reticulated with deep purple veins. During the first year of its growth, the plant has no aerial stem, all the leaves being radical and stalked. In the autumn these leaves die, but the roots survive the winter, and in the following spring, send up an aerial stem, which grows to the height of two, three or four feet. The plant flowers toward the end of May or in June.

Var. *b. annua*. Annual black henbane. This was at one time considered to be a distinct species, and was called *Hyoscyamus agrestis*. It is now admitted to be a variety only. The root is annual, the stem smaller, less branching, and less downy, the leaves are less deeply incised or sinuated, less hairy and clammy. It flowers in July or August. Altogether, it may be regarded as a weaker or shorter lived variety. Not unfrequently its corolla is devoid of the purple veins.—This peculiarity was at one time thought to indicate a distinct species, which was named *Hyoscyamus pallidus*.

Miller mentions in his Gardener's Dictionary, that a variety of *H. Niger* was found by Professor John Martyn, near the castle at Cambridge, about the year 1729, with the corolla and anthers of a pure brimstone color, without the least tinge of purple. The seeds being sown in the botanic gardens at Chelsea, produced the very same variety. But he does not say, whether this was an annual or biennial sort.

Mr. Babington states that this non-reticulated sub-variety grows wild at Esher, in Surrey. On inquiring of Mr. Arthur, of Mitcham, we found this non-reticulated sub-

variety was known to him, though it is not distinguished as a different sort by the herb growers.

No positive evidence has hitherto been adduced of the superiority of the biennial over the annual sort; but the prevailing belief is, that the more fully developed and longer lived plant, in all probability, would more perfectly elaborate its peculiar juices, than the weaker and shorter lived sort, and on this ground it is presumed to possess greater activity. Although the present pharmacopœia, (1836) leaves the pharmacist to use either sort, the forthcoming new London Pharmacopœia, it is reported, will direct the employment of the biennial variety. The biennial plant ought to be gathered for medicinal use, during the second year of its growth, at or soon after the commencement of inflorescence. The leaves at this stage are attached to the stem which bears the flowers, and when the plant is entire no mistake can be made, as the leaves of the first year have stalks which issue from the ground, as described by Dr. Houlton.

Mr. Squire has also pointed out the importance of distinguishing between the first and second year's leaves. When the stalk is removed the distinction is less easy, and the herb, as sold in market, not unfrequently contains a mixture of the two kinds.

Although the above are general distinctive characters, they occasionally merge into each other in individual plants, so that it is not always easy to distinguish the varieties or age, especially when the plants have been packed for traveling, and when they have been partially or entirely dried. Consequently the purpose for which the first year's leaves are chiefly used, is for preparation in the dry state, in which they might, on a superficial examination, pass for the second year's leaves. Sometimes, however, so little care is taken to disguise the fact, that the long stalks betray the age of the leaves.—There is a strong temptation to use the leaves in this stage of their growth, first, because they yield a return which would otherwise be sacrificed; and secondly, because in brightness of color they surpass the mature leaves, and therefore, attract those whose primary

object is to please the eye. But the instructions contained in the pharmacopœia to select the plant at the time of inflorescence, are founded on correct principles. Mr. Moore, of Mitcham, informs us, that he never sells the first year's leaves, considering them worthless.

The annual and biennial varieties are cultivated at Mitcham in distinct plantations. Formerly, the biennial was chiefly met with, and it was at one time a disputed point whether henbane was ever matured during the first year. Since this point has been decided, the annual plant has come into cultivation, and it has gradually superseded the biennial to a certain extent, as it is found more profitable to realize the return in a shorter period. The seeds are sown early in the spring; as soon as the weather is favorable the annual plants are thinned, if necessary, and the crop is gathered about July or August.

The biennial plants are transplanted in the spring of the second year, and the gathering of the crop commences sometimes as early as May, and generally continues throughout June and the early part of July.

It is usual to change the ground every two or three years; but this appears to be optional as the plant grows wild in many places for ten or twenty years in succession, and some of the finest biennial plants are met with in the wild state. Mr. Bridger, (at Mr.

Moore's, Mitcham,) informs us that he has seen specimens of these plants weighing as much as fourteen pounds, while the annual variety seldom exceeds three or four pounds, and the average much less.

The following report shows the variation in the product of extract arising from various circumstances. The notes were taken merely for private use, but they are quoted from the original memoranda, including the cases of failure in the result. With two exceptions the plant was furnished by the herbalist or grower, as the biennial variety in the second year of its growth.

The leaves were separated from the stem, sprinkled with water and crushed, the stem being rejected.

June 18, 1844.—Henbane, 3cwt. 21lbs., produce 14lbs. 9oz. The herb was crushed in a mill, and brought to the premises in the state of pulp. This plan was found not to answer; the delay occasioned by its transference through the different stages of the process impaired the quality, and although the produce was large, it was unfit for use, and would be condemned by the druggist.

The plan of crushing the herb in a mill, although the most effectual in regard to the quantity of extract produced, is liable to this disadvantage, that when the herb is too much crushed, the inert fibers are reduced to a pulp, and may in part pass through the cloth with the juice.

POMOLOGICAL LETTER.

MT. JENNER, (near Versailles) IND., }
January 27th, 1850. }

DR. WARDER—

Dear Sir: It is easy to write on subjects connected with Horticulture when we are willing to jump at conclusions, as do most of those who contribute to the *curculio literature* of the country; but, to write that which is really useful, requires enlarged experience, and close observation. My experience in Horticulture is confined mainly to the pomological department, and in that, it is by no means perfected. I have discovered, however, that we have no work on Fruits

which is a safe guide to a western man desiring to establish an orchard. Each individual here who commences the work of planting is obliged, to a certain extent, to act the pioneer, and gain knowledge for himself. This is a sure way in the end, it is true, but slow and very expensive. We consult the works of Downing, Kenrick and others, and procure the catalogues of the most celebrated nurseries, and find so many varieties marked with stars, and described as first-rate, excellent, splendid and all this, that our desires elongate and expand with such rapidity that we can scarcely rest by day, or sleep at night,

until we procure an extensive assortment of the landed varieties; and then we dig about them, and prune, and soft-soap them, and do every thing we can to coax them to yield fruit equal to our expectations, and watch with eagerness the first developments, and at last discover that perhaps half our trees, or more, yield worthless fruit. Then comes the work of sawing off limbs, and regrafting with a few substantial varieties which we have proved to be good. Thus, the orchard man in the West, you see, is doomed to experience expansions and contractions as well as the banks.

The Cincinnati Horticultural Society is doing much good in pomology, but has much more yet to accomplish. I have been looking over the list of premiums proposed to be awarded the present year, and with regard to apples, I find as follows, viz: first Saturday in August, a premium of two dollars for the best three varieties, and at the fall exhibition seven dollars for the best ten varieties. It seems to me, (with all due deference to the opinions of the Society,) that a list of first-rate apples for the West will not soon be made out in this way. If the Society would offer a premium for the best *one* variety for use in July, and in August, and in every month of the year, and each variety to be accompanied by a specimen of the orchard soil, procured by driving a tube eighteen inches or two feet into the ground, and this soil to be analyzed by a competent chemist employed by the Society, we should begin to get information of a reliable character, which would mislead no one. Also, the kind of treatment as to culture and manure should be given. As the matter now stands, an individual who could produce the best one variety in use in any given month in the year, stands no chance for the honor of a prize. He must have the three best in August, or the ten best in the fall.

A gentleman in Ohio having experience in pomology, was written to some years since by a friend, to make out a list of the best varieties for an orchard of one hundred trees. The advice given was, to plant ninety-nine trees of the Golden Russet, and the hundredth he might choose for himself. I would not become so exclusive as this, but if we had a list, well tested, of one good variety for each month in the year, found to do well on western soil generally, planters might safely be left to themselves as to what other varieties they might choose to try.

Would not the Society do well also to perfect a list of sweet apples for each month in the year, for the benefit of farmers who desire to raise apples as food for hogs? This is a subject which is now, in some localities, attracting much attention. Last year I tested forty varieties of apples, and have twenty more not yet tested. They are nearly all celebrated varieties. I find that many of them are valueless in this locality, and the trees will have to be regrafted. For example, there is the Red Astrachan, put down in New York in select lists, while in my orchard, I am compelled to pronounce it one of the handsomest and most worthless apples which I ever beheld or tasted.

In the last number of your Review there is an interesting report of the State Fruit Committee of Kentucky, on the location of orchards, upon which I beg leave to make a passing remark. The report states that "the highest grounds are best fitted for success in orchard culture." This is a truth to which I can testify from personal observation. The reason assigned is, that great elevations are subjected to such increased cold as keeps vegetation back in spring till the danger from frost passes by. This keeping back of vegetation in spring, is, I apprehend, not the true cause of success. The report further on states, that in the winter of 1849-50,

trees on high ground preserved their buds, whilst those on lower grounds were destroyed. The keeping back of vegetation in spring certainly does not explain this case. But further on in the report we find, that an observer had one thermometer in the high grounds of his orchard, and another in the bottom thirty-five feet lower, and at 1 o'clock at night the thermometer in the bottom was at 28°, and that on the high ground at 33°. Here is a fact which will explain the greater security of orchards on high ground, both in winter and spring. The valleys during the day absorb more heat than the high ground, and at night the rarefied air of the valley ascends, and the denser air of the high land descends, and consequently, during the night, the temperature of the high land exceeds that of the valley. This is a fact which has long been known to medical men, and those of them who believe that Remittent and Intermittent fevers are caused by change of tem-

perature, appeal to it in explanation of the fact that the valleys are more subject to these fevers than the highlands.

I have seen an article some years since from the pen of Professor Kirtland, of Ohio, in reference to the greater safety of orchards on high lands, in which was reported observations with thermometers, showing a much higher range of temperature during the night on the hill than in the valley beneath. Every one who has traveled much at night in hilly regions of country, must have observed occasionally being struck by currents of warm air, having ascended from the neighboring valleys.

I must now bring this desultory letter to a close—it is at your disposal. Your undertaking is an important one for the interests of the West, and I sincerely hope it will meet with a success equal to its merits.

Very truly yours, etc.,

W. T. S. CORNETT.

NOTES ON VINERIES.

Editor of the Western Horticultural Review.

In the February number of the Review, I see a communication from Mr. WM. RESOR, commenting on my remarks on the foreign grape vine in your December number. While I can not but feel pleased at having attracted the notice of so distinguished a horticulturist as Mr. Resor, I am somewhat mortified that you did not make the corrections I suggested to you, verbally, after having given you my paper—respecting the mulching of the inside border, planting *inside* the house, etc. I have no doubt they escaped your memory. The vines should always be planted inside the front wall of the house, and about one foot from it. They are more easily pruned, trained, cleaned, etc., and less subject to be eaten, or injured by rats, mice, and other vermin—or by many other causes, than when they are

planted in a hole in the wall. As the front wall of the vinery will have been built on arches, below the surface of the soil, the roots can travel to the outside border as fast as they feel disposed so to do: and there will be no necessity for boards to cover the holes in the wall, as in Mr. R's. plan.

The ground inside the house, or "inside border," should not be mulched, unless, perhaps, for a small space, and for a short time, around the stems of the young vines when they are planted. Afterward, as the leaves of the vines will give ample shade, and the evaporation will not be too great, mulching will be worse than useless, it will only serve to produce insects, mildew, and dampness. It was the outside border I directed to be mulched.

The main causes of mildew, are the sud-

den chilling of the soil by heavy cold rains, (one reason for planting inside,) or the equally sudden changes produced by alternations of very hot, and cold, cloudy weather. No amount of scattering of sulphur will prevent mildew from making its appearance in either of those cases; sulphur only affects the Fungus (mildew) when it appears—it does not exercise any influence on the badly elaborated sap in the plant, which produces the mildew.

A word as to stopping the spurs on hot house grapes. I always pinch off the top of

the shoot as soon as there are two large, healthy, well developed leaves above the second bunch of blossoms, and cut just above the uppermost of those leaves. The "old grape grower" who told Mr. R. that he had ruined his grapes by leaving only two bunches to blossom on each spur, must have been very old indeed. Mr. R. was right.

I fully agree with Mr. R. in his other observations, as will be seen by reference to my paper before alluded to, and I consider his plan for a walk admirable.

MICHAEL RICE.

THE LOCUSTS,

As they will appear in Baltimore, and all the country from Germantown, Pa., to the Potomac river in Maryland, and from the Delaware river to the Blue Ridge, in May, 1851.

BY DR. GIDEON B. SMITH.

I HAVE been requested by numerous persons to give to the public the *particulars* in relation to the history and habits of this singular insect, some of them remarking that, if I can predict with so much certainty the time and places of their appearance, I can of course give them all other facts connected with them. I will endeavor to do so. I shall continue to call this insect the *locust*, because the name is in universal use; and as we write to be understood by all readers, it is proper that we should use such language as all understand. The scientific name is *cicada septendecim*.

In the whole range of natural history there is nothing more strange than the fact,—which has been established with as much certainty as any fact in astronomy ever was,—that a little insect not as large as the smallest ant shall pass into the ground and remain there seventeen years, and then emerge in the form of a comparatively large insect; or, that a certain tribe of insects shall appear here in immense numbers—numbers almost equal to those of the sands of the sea shore—exactly once in seventeen years, always in the same month, almost on the same day and same hour. It is indeed wonderful, but it is nevertheless true. Another fact, equally strange is, that there are numerous tribes of these

insects. I have the particulars of twenty-eight districts in the United States, in each of which these insects appear every seventeen years; but each district has a different year for their appearance from that of any neighboring district. For example, the locusts appeared about Richmond and east of the Blue Ridge in Virginia, in 1843, and will appear there again in 1860; while on the west of the Blue Ridge they appeared in 1844, and will appear again in 1861. So it is over the whole of the United States south of latitude 44°; north of which I have not yet heard of their appearance. I have no doubt that they appear throughout the West, as far as the shores of the Pacific. I have the fact of their appearance at Independence, the western limit of Missouri. In some one part of the American territory, they appear no doubt every year, that is, they appear somewhere every year. I have only been able to get authentic accounts of their appearance in fourteen out of the seventeen years. The other three years they appear in the western wilds, without doubt. But that the progeny of the same insects that appeared here in 1834, will appear here again in 1851, there is no doubt. They do not pass from one district to another, but remain in their own district. Though they can *fly*, their flight is very short; from tree to tree, some fifty or a hundred yards, is about as far as they usually attempt to fly. Very high winds frequently drive them to a considerable distance, even over rivers. Rivers and moun-

tains are generally boundaries of their districts. Though they will go pretty well up the sides of the mountains, they rarely ever reach the top, or go over it, and they cannot fly over a river the eighth of a mile wide. Still, the whole country, now occupied only once in seventeen years, will, in the course of time, be visited by them every year, in consequence of the mingling of the districts by the insects being wafted by the winds from one to another. As before stated, there are now several places where the insects of neighboring districts have commingled, causing their appearance every eight and nine years alternately.

By shaving off an inch of the soil, from the 1st to the 10th of April, or any time before the 20th of May, in any place where trees, etc., grew in 1834, you will open the chambers of the locusts. They look like half-inch auger holes. Dig down, and you will find one locust in the hole. This hole or chamber is a place wherein he prepares himself for his final appearance in the perfect state. During the night, and in cold or wet weather, he is at the bottom of the hole, eight to twelve inches deep; in the middle of the day he is at the top, evidently preparing to slough the shell or skin. The walls and top of the chamber are made water proof by a peculiar viscid humor.

About the 20th of May, a day or two earlier or later, according to the weather, they will begin to leave the ground. You will see their old shell adhering to the bark of a tree or shrub. But few will be found the first day, more the second, and so on, increasing in numbers till about the 27th of May, when no more will leave the earth.

When they come up from the earth—always about day light or a little before—they immediately climb the first object they meet with, a tree, or bush, or stake, any thing, two or three feet. They then lay hold of the bark, fixing themselves firmly by their claws, and commence working themselves out of their old shell, which is done by rupturing it on the back between the shoulders, and drawing themselves out. As soon as they get fairly out, they seize hold of the old shell with their claws, raise themselves and begin to expand their wings. Their bodies and wings at this time are exceedingly delicate, white and moist; but a few minutes exposure

to the air dries and hardens them, so that by the time the sun is fairly risen, they are perfect and can fly. The wings before sloughing are neatly folded up, and it is a beautiful sight to see them unfolded, and in a few minutes changed from the most soft and delicate tissue, to the firm and rugged wing of the perfect insect. If it be a wet or very cloudy day, they are very apt to perish in the operation of sloughing and drying.

About the 15th of June they commence depositing their eggs. This is a very interesting sight. You will see one attached to a limb or twig, and it will not fly away as you approach. Look closely, and you will see it excavating a hole in the limb with its curious ovipositor. Watch it closely, and as soon as it has inserted the ovipositor completely into the limb, take hold of the insect, and gently but quickly draw it forwards, and apply the point of the ovipositor to the palm of the hand, when you will see two eggs ejected into your hand in quick succession. They deposit two eggs at each insertion of the ovipositor, and generally five to ten pairs in each place on the limb. She then goes to other places on the same limb, or to some other limb, and repeats the operation, till she has laid about four hundred eggs. The eggs are white, or pearl color, about the twelfth of an inch long, and about one-sixth as thick as they are long. It is this operation that destroys the small limbs, the excavations cutting off the sap vessels. The time of depositing the eggs continues till about the 20th of June, when they cease. All kinds of trees and shrubs are selected by them for their deposits, except pines or other turpentine trees. They do not seem to select the hardest nor the most soft wood, but that which is about the size of their bodies or less, seems to be chosen; the operation requiring them to grasp the sides of the limb with their claws, which they could not do so well if the limbs were large. By grasping firmly with their claws, they are able to make great pressure upon the point of the ovipositor, and thus effect their object.

From the 1st to 26th of June, all shrubbery of value should be protected, either by carefully covering it with cheap gauze, or in the case of pot plants, by keeping them in the house. About the 25th of June the old locusts will have disappeared altogether.

About the 25th of July the eggs will be ready to hatch. Then take a limb containing them, cut carefully till you expose the eggs, and take them out, place them in the palm of the hand, and they will hatch in a few minutes. The little insect frees himself from the egg shell precisely in the same way that the large one did in the spring, by rupturing the shell on his back. As soon as he is fairly out of the shell, he starts off briskly in search of food. Let him get to the ground, and you will see him work his way into it; follow him, and you will see him attach himself to the tender roots of grass or other vegetables, and commence taking up the liquid exudation from the surface with his little rostrum or snout. These observations can only be made with a good magnifying glass; with the aid of the glass you will see the young insect has every feature and member precisely the same as the large one had when he came from the ground in the spring. By carefully watching, you will see the young insect coming out of the excavations in the limbs, and falling to the ground. You can sometimes see great numbers falling from high trees. They are like little motes in the air, and require sharp sight to see them. They are so small, and their apparent specific gravity so low, that they are not injured by the fall to the ground.

The locusts do not go deep into the ground, but live upon the vegetable juices of the roots near the surface, which they take with their snouts or rostrum. There are three small hairs in the snout which, in feeding, are projected, and spread out over the surface of the roots or leaves of trees, and these collect the juice and convey it by capillary attraction to the stomach. You can see this operation very distinctly in the perfect insect, by watching it with a magnifying glass. They have no other mouth or means of taking food either in the larva or winged state.

The ovipositor is a most curious instrument. It is about three-eighths of an inch long, of the size of a small pin, flattened at the point, and the whole forming a moderate curve. It is composed of a material very much resembling tortoise shell, of a dark reddish, brown color. It is composed of three pieces, a center piece, which is the tube or duct, and two side pieces. The center piece or tube, has a very sharp chisel-formed point,

with two sharp projecting points, one above the other, below the orifice, resembling a fish's mouth. The two side pieces are supplied with saw teeth on their edges, and their flat faces are rasps. They are attached to the center piece by tongue and groove. In use, the center piece is fixed firmly to the bark, and the two side pieces commence working up and down, first one and then the other, alternately, and thus the excavation is made. All this, however, can only be seen with the aid of a powerful magnifying glass. On looking at the instrument with the naked eye, no such mechanism would be suspected.

The musical organs are also very curious, and difficult to describe. Directly under the shoulder of the wing, on each side of the chest, there is a beautiful membrane, somewhat triangular, convex, and ribbed with fine bony ridges. This membrane resembles a small shell, and is stretched over a cavity in the chest, the lower angle connected internally with a strong muscle. On the breast there are two large scales, one on each side, firmly attached to the breast above, but free below. On bending the body backward, these scales are elevated and expose two large cavities, also covered with extremely fine and silk-like membranes. These cavities are connected with those under the musical membranes beneath the wing shoulders, and probably serve for lungs. When these cavities are filled with air, the musical organs or membranes, first described, are made to produce the sound by the large muscles; the bony ridges of the membranes being made to act upon each other with such rapidity that the motion is scarcely perceptible.

The music song or sound, produced by the myriads of insects in a warm, dry day, from about the 25th of May to the middle of June, is wonderful. It is not deafening, as many describe it,—even in its height, it does not interrupt ordinary conversation. It seems like an atmosphere of wild, monotonous sound, in which all other sounds float with perfect distinctness. I never could distinguish any thing like the word "*Pharaoh*" in these sounds. After you have become satisfied with the novelty of this music, which will be in a day or two, it becomes exceedingly tiresome and doleful, and to many very disagreeable. To me it was otherwise, and when I heard the last note on the 25th of June, the

melancholy reflection occurred—shall I live to hear it again?

Probably the first indication many persons will have of the approach of the locusts, will be the industry with which they will find the hogs rooting up the ground in April, in the woods and fields. It is a great festival for them. And as soon as the insects appear above ground, chickens, turkeys and all poultry, will also have their feast. So fond are the fowls, birds, pigs, etc., of these insects, that they will scarcely touch other food during the locust season. This has a remarkable effect on the hen's eggs laid after the locusts appear—their yolks are nearly *white*. The chickens become very fat, and of fine flavor. Even the little wrens will be seen flying off with a locust in their mouths, and all the insectivorous birds then have a great festival.

In conclusion, people ought not to be alarmed. The W on its wings does not indicate *war*, nor the E England. The "sting" of the locust never killed any body, for the best of all reasons—because it *has none*.

The insect has neither means of offense nor defense; and all the stories that are told of children being killed by their sting or bite, are fabulous. If death ever was produced, or any less injury when locusts were present, some other cause effected it.

I have thus given the public such a picture of this most interesting insect, as will enable any one to observe them understandingly at the approaching season. I have also a few well drawn copper plate engravings, representing them in all their stages, as well as some of the insects themselves, preserved from those of 1834.

Thanks to the kind friend who sent the copy of the Baltimore Patriot from which this very interesting article is taken. Dr. Smith is a proper person to aid in the resuscitation of the Maryland Horticultural Society, and we, of the West, hail with joy, the prospect of a new sister in this delightful walk. Let it be done!—Ed.

A LETTER FROM THE COUNTRY.

THIS communication is one of many which have recently come to hand to cheer the editor in his undertaking. They are the more highly valued, because they come from strangers, bound by sympathy of feelings in a friendly relation. A. L. R. is a village clergyman, who has planned and executed a very pretty church and parsonage, which are much praised for their beauty and taste. I hope he will write again.

GREENFIELD, HIGHLAND Co., O. }
February 8th, 1851. }

DR. WARDER—

Dear Sir:—I have had the pleasure of reading, (I trust with profit,) your valuable Review. The West has long needed such a work. Those published by the lovers of Horticulture in the East, do not meet the wants of Horticulturists of this great Valley. I would not disparage those publications, for they are ably conducted; but in many re-

spects the experiments refer to their soil and climate. Our climate is quite different. While they have to contend with one class of difficulties, ours are of a different character. We therefore need a publication in which western experiments may be recorded for the general good. We need a periodical to correct our bad tastes, or to cultivate the taste for rural beauty where there is none.

A journey in any direction through the West, will convince any one of the general want of horticultural cultivation; and this fact is another reason why such a publication as your Review, should be sustained.

There are hundreds of situations on our beautiful Ohio, to say nothing of the interior, that might be made to equal many of those on the Hudson, if not in grandeur of natural scenery, at least in artistic beauty. But some of these situations abound in natural beauty. There is one not more than fifty miles above

your city, that commands a delightful prospect of the placid Ohio for three leagues, and with proper culture might be made an Eden. Yet it has been left unadorned by art, (unless you call a square one story house and three or four locust trees adorning)—and this is not an isolated case. Our agricultural publications do not meet these wants—their field of labor is quite different—having especial reference to the improvement of stock, and the best modes of tillage.

We need to be taught the best varieties, and mode of growing fruits in our soil and climate; the best locations and modes of erecting our dwellings, so as to secure convenience, health, and comfort; and the best mode of ornamenting the grounds around our dwellings.

Give us some medium by which we may reach the public mind, and you will soon have

no reason to complain. Only convince the farming community and all others, that it is cheaper and more conducive to happiness to do right than to do wrong, and we will soon see a change.

I therefore, hail with joy, the appearance of your Review. Adapt it to the wants of the man of moderate circumstances, as well as those of affluence, and you will have no reason to regret undertaking such a publication. Our citizens are not devoid of taste in these things; the only reason there has been so little exhibition of it, is because there has been no great effort to awake it up and call it out.

Hoping that the Review will fully meet the Horticultural wants of the Great West, I send you my mite to aid in sustaining your enterprise. Respectfully, yours,

A. L. R.

From the Cottage Gardener.

TANKS.

THE necessity for the use of liquid manure is universally admitted, and so much might be collected near every kitchen door, which is now wasted, or is even a nuisance, that the readers of the Review will be glad to see a simple and cheap plan for collecting this valuable material, and one which can be so completely concealed from view. All those who are not willing to attempt the construction of a tank as here proposed, should at least sink a cask even with the ground to receive the sewage from the end of their back door gutter or drain from the kitchen sink; this will provide rich nourishment for their fine roses, and enable them to produce their exquisite flowers.—ED. REVIEW.

THERE is no greater improvement that can be introduced in cottage-gardening than that of making use of tanks to receive the sewage as you propose. The expense of construction is the greatest hindrance against their

adoption; but if I can show that very substantial tanks may be put up by a handy laborer, and at less than one-half the usual cost, it may induce many of your readers to give my plan a fair trial.

I may remark, as a general rule, that it never advisable to make liquid manure tanks deep—as when a tank is to be cleaned out, the slush at the bottom is easier thrown out the nearer it is to the surface. The depth should not exceed four feet, and, unless a division be in the middle, to make a double tank of it, six feet may be wide enough—capacity may easily be given in the length. The sides and bottom I make of concrete and a brick arch to cover them, thus: mark out on the ground the size you mean the tank to be, running a line down each side and across both ends, and with a spade make a mark along the line—outside this mark, dig out a trench four feet deep all round, and as narrow as your man can work it; from fifteen to eighteen inches will be about the width he will require to reach down four feet; let him form the sides of the trench quite even, and

slope *inward* three inches from the perpendicular. Into this trench concrete is poured to form the walls of the tank, the same way as melted lead is thrown into a mould; the reason for departing from the perpendicular will now be apparent, the concrete will lean, as it were against the outside of the trench when dry. Concrete is made with one part unslacked lime and six parts rough gravel, such as would do to mend roads with; and, to save labor, the mixture should be made close to the trench; thus put down six barrowfull of gravel in a flat heap, and one barrowful of lime over it, then pour water on the lime, and it will soon crumble down; mix it with the gravel thoroughly, adding as much water as will make it so soft that it will run off the spade, then throw it right and left into the trench till it comes up to within three inches of the top of it. The four walls of the tank are now finished, and must remain to dry, one month in summer and five weeks in autumn or spring; by that time the concrete will *set* as hard as a solid piece of stone. You will now say, the next job will be to throw out the soil inclosed by the concrete, and make a bottom for the tank; not so fast, however. I grant that would be the easiest way; but then you would have to get a wooden frame to form the arch over, and that frame would be expensive. My plan is to heap soil over the middle, when the trench is being made; pack it close and round it off in the shape of the arch; it will thus make the best possible *center*, as a bricklayer would call the wooden frame, to form the arch on; and any intelligent laborer could surely build an arch on such a center. The arch being finished, the inclosed soil must be thrown out at both ends or gables, and three inches of concrete thrown over the bottom; this will dry in a week. Now, if the lime and gravel were suitable, such a tank should hold water for generations to come; but having never tried a tank that way, I cannot be positive on the point. I always plaster them over with a thin coat of cement, first notching the surface of the concrete, so that the cement will take a better hold of it. I use common Roman cement, one part, and two parts rough sand, but sea sand will not answer so well as pit or river sand. The drain or pipe conveying the sewage to the tank must enter it at one of the ends and the flow or discharge

pipe, if any, pass out at the other end; both ends may then be closed up to the arch, with a few bricks without mortar. The soil thrown out may then be returned over the top of the tank, or levelled about and planted over with shrubs.

SENILIS.

Sowing and Protecting early Peas.

THIS being the very best time for putting in the first crop of peas, I would recommend them to be sown on a southern border, and also on a northern aspect, both at the same time. This insures success either in inclement or mild winters, and sometimes both crops are preserved. In open compartments, let the ground be ridged one yard wide; sow both on the southern and northern sides of the ridges. In case of long frosts and snow, there are ten chances to one, that those on the cold side will be protected, while those on the sunny side, deprived of snow, will be destroyed by frost. In mild weather, dredge soot between them, in order to ward off slugs, etc. Sink a pot or pitcher greased with good lard, and half filled with water, into the earth up to the brim as soon as the peas are sown; this will trap all mice, and a cat's skin, neatly stuffed, will frighten the birds.

J. HARDY, Nov. 4.

Gard. Chron.

Physical Impossibility.—SUCH stories as the following are current in the newspaper, and are republished here to afford an opportunity to say, that their fallacy is apparent to all gardeners and botanists. The "development theory" is exploded.—ED. REVIEW.

Apples on a Grapevine.—Mr. Nice, of Pottsville, Pa., grows a grapevine twined round an apple tree. The vine has for years born blossoms but no fruit. This year fruit appears, which externally is apple, with its down, its flush, its tufted crown, etc.; internally the pulpy texture is more grape than apple, but the seed and capsular tegument favor the apple.

The Cumberland (Md.) Civilian mentions a similar case in the garden of Mr. John G. Hoffman of that place, where two distinct and well formed apples are growing upon a grapevine, as healthy as other young apples upon a tree in the immediate vicinity of the vine.

A CHAPTER ON FOREST TREES.

MR. EDITOR: That this is the age of improvement, it would, in the eyes of some, be a folly to question; but may it not, with equal propriety, be designated *the age of Destruction*, especially when we look around us and behold the unsparing manner with which the *woodman's ax* is applied to destroy the few remaining relics of Forest Trees which have till lately escaped the doom of their former companions.

"*Clear the track,*" seems to be the order of the day, and every ancient Forest Tree must be cut down, (whether in the way or not,) to make room for the march of improvement that it is contemplated either immediately or remotely, shall be made.

These reflections have been forced on me by noticing, of late, the wanton manner in which a number of fine old scattering trees north-east of our city have lately been destroyed. Surely the paltry pittance which their fragments would bring in the shape of fire-wood, could hardly be a temptation for their destruction.

But you will perhaps say as the mischief is done, how can we remedy the evil? and this will bring me to the main object of this communication, which is to suggest that if our cupidity or self-interest prompts us to cut down and destroy trees, it is our duty also to plant and protect others, and not to expose our fellow-mortals of this or succeeding generations to be melted by the rays of our intense summer suns without the shade of one friendly tree to shield them from its burning influence. I also wish to describe, in terms familiar to the general reader, some of the principal Native Trees of this vicinity, and others of foreign origin, that may be easily obtained here.

Could the Constitutional Convention now sitting in our city, be induced to adopt a

clause in the new constitution rendering it imperative upon all Turnpike Road Companies to plant and protect rows of trees on either side of the highway, at intervals of 75 or a 100 feet, they would be entitled to the grateful remembrance of millions of their fellow-citizens; the cost to the companies would be a mere trifle compared to the advantages obtained in a moral, social, or ornamental point of view. The following observations are designed for the uninitiated, and of course are not intended to enlighten planters of experience.

We have in the vicinity of this city some of the finest species of forest trees the world can produce, yet, until quite recently, our citizens seem to have had no idea of planting any but the black Locust, (*Robinia pseudo-acacia*;) one of the very poorest for shade or ornament. The last few years have shown the dawn of improved taste in this particular, still, as the list of those generally found, is very limited, we propose to enumerate some of what we consider the most desirable, and to point out some of their distinctive characters. Two of the finest trees for avenue or street planting, or as single objects, are the Silver Maple, (*Acer dasycarpum*;) and the Sugar Maple, (*Acer saccharinum*;) they are of thrifty growth, erect form, with handsome dense heads of foliage, coming into leaf very early in the spring, and their rich varied hues in the fall must render them objects of universal admiration. The beauties and charms of the wide-spreading Beech have often been sung by the poet, sketched by the artist, and admired by the rural naturalist as much as either of these, and it certainly merits all that has been said or sung in its praise, and yet we rarely see it planted in ornamental grounds. The Tulip Poplar (*Liriodendron tulipifera*) is a really beautiful object

either in or out of bloom. I well remember the first time I saw this beautiful tree in blossom on a nobleman's lawn in England; it struck me as the most beautiful flowering tree that my imagination could conceive, and although it may be found growing wild in nearly all the woods around this city, yet we seldom see it out of such localities. Next comes the Bass-wood, (*Tilia americana*), another very handsome symmetrical tree; again we have the Buttonwood or Sycamore, (*Platanus occidentalis*), the mammoth among the western forest trees, well calculated for planting on low, wet grounds, but not at all adapted for street planting or near buildings, as it is very subject to the attacks of caterpillars. Then there is the White Elm, (*Ulmus americana*), another noble, sturdy looking tree, and of different appearance and habit of growth from either of those already mentioned. Some of our native Ashes are also splendid trees; nor should we overlook the merits of the "brave old Oaks," whose durable and lasting qualities have been the theme of poets from the earliest times, and in some parts of the world have been thought of sufficient importance to demand legislative protection to foster and encourage their growth and increase. The Kentucky Coffee tree, (*Gymnocladus canadensis*), is another fine native of picturesque and singular habit of growth; its rugged and erect limbs, when bare of leaves, looking very abrupt and peculiar. The Box Elder (*Acer negundo*) is another beautiful tree, somewhat resembling the Elm in general appearance when in leaf, but of different habit of growth, being more compact and dense in its foliage. The bark of the young wood has a cheerful lively green when bare of leaves; (we have noticed that this tree, when planted in cities, is particularly subject to the ravages of the caterpillar.) The Sweet Gum, (*Liquidambar styraciflua*), and the Sour Gum, (*Nyssa multi-*

flora), are two very fine trees. The Hackberry (*Celtis crassifolia*) also has its distinctive beauties in the eyes of a lover of nature, for large plantations. Nor should we overlook the diversified beauties of the sweet Mulberry, (*Morus rubra*), the Hickory, (*Carya*), a noble tree, and worthy of being the emblem of one of our great political parties, nor the Buckeye, (*Pavia flava*). The Wild Cherry, (*Cerasus virginiana*), is also a very beautiful tree, although we are somewhat prejudiced against this, as well as the Mulberry, from noticing that they are both very subject to the destructive ravages of the caterpillars. The Larch is a fine deciduous tree, and of peculiar form and habit of growth, resembling when in leaf some of the Firs; it thrives well on poor sandy or gravelly land, and in Europe is very extensively planted on what was previously considered barren unproductive soils. The deciduous Cypress, (*Taxodium distichum*) is another distinct and very beautiful tree, and should find a place in every plantation however limited in extent; its fine pinnate foliage when in leaf, with its graceful habit of growth, will attract the notice of the most indifferent observer. Although in its native habitation in the southern States it attains the height of 70 or 100 feet, it makes by proper pruning and attention a handsome shrub of any height desired, from six feet upward. We had nearly overlooked the Black Walnut, (*Juglans nigra*), one of our noblest ornamental, as well as one of the most useful forest trees. Standing alone, it is really a magnificent object; it has an air of sturdy independence in its appearance that would attract the notice of those least observant of nature's beauties.

Nearly all the above may be found growing in the woods within a few miles of Cincinnati, yet, with some three or four exceptions, we rarely see them planted in this vicinity. If the foregoing list is insufficient, we can

add or substitute some of the following, all of which have their peculiar beauties to recommend them to the admirers of rural nature, and will add greatly to the diversified charms of the landscape.

One of the finest trees for avenues is the European Lime Tree, (*Tilia europea*.) Some fine specimens of these may be seen on Pike street, in front of Mr. Longworth's residence. It is of thrifty growth, dense foliage, very early in leaf in the Spring, and having a handsome, conical outline. The next best we conceive to be the Sweet Chestnut, (*Castanea vesca*.) No one who has not seen them, can form any conception of the magnificent appearance of the groves and avenues formed of these trees in some of the national parks in England, and in the old fields in our Eastern States, where they are highly prized for their timber. The Silver Poplar (*Populus alba*) is another beautiful tree of very distinct foliage and general appearance, the under sides of its leaves being of silvery whiteness, whence its name. The Tree of Heaven (*Ailantus glandulosus*) also has its beauties to recommend it, the long pinnate leaves giving quite an oriental appearance and character to the scenery. The Paper Mulberry, (*Broussonetia papyrifera*) with its dense heads of deep green, impervious to the sun's rays even in its fiercest noonday splendor, its grateful shade being as refreshing as an Oasis in the desert to the weary traveler. (Note, the three last should not be admitted in avenues, or ornamental grounds where thickets are not desired, as they all sucker extensively from the roots, but for road-sides or for side-walks in our cities, we think them among the very best, forming very striking and agreeable contrasts in their foliage, habits, and general appearance, and are all of rapid, thrifty growth.) The Catalpa (*Bigonia catalpa*) is another fine avenue tree, either for town or country, but requires some

care while young or until it acquires sufficient strength and stiffness to withstand the high winds of summer which I have seen distort it into the most grotesque shapes and forms. The Lombardy Poplar (*Populus dilatata*) is a picturesque and very ornamental tree; its tall, slender and gracefully tapering form rendering it conspicuous and distinct from all its companions, however numerous and diversified they may be. The Paulownia imperialis is a tree recently introduced into this country from Europe, where it had been brought from Japan. In its habit and general appearance it somewhat resembles the Catalpa, belonging to the same tribe, but it is of more erect habit of growth, and its flowers, which are borne in large panicles, are of a delicate blue color; it flowered for the first time in the neighborhood of Cincinnati, during the summer of 1850—it is of remarkably rapid growth; a few years ago I had one in my grounds, which grew thirteen feet by the middle of August, when the top was broken off by a hail storm, much to my discomfiture, as I had been watching its growth with a great deal of interest, and speculating on the height it might probably attain during one summer, and I have no doubt it would have reached eighteen or twenty feet. It should be planted on a lawn or open space apart from other trees, that its beauties may be more distinctly seen. The peculiar characteristics of the Weeping Willow, (*Salix babylonica*.) must not be forgotten. Many think that these trees have a sombre and gloomy look about them, and that they are only fit for cemeteries. To a serious and reflective mind, its appearance may associate it with the memory of some dearly loved, or long cherished friend, but it is not the less beautiful on that account; and there are many points in Landscape gardening where it may be introduced with fine effect. The Norway Maple (*Acer platanoi-*

des) is another very ornamental tree, recently introduced into this vicinity; it has a stiff habit, spreading growth and handsome foliage, somewhat resembling our Buttonwood or Sycamore. I have no doubt it will prove a valuable addition to our list of ornamental trees. The Quaking Aspen (*Populus tremula*) is another singularly remarkable and very handsome tree, its leaves vibrating with a trembling motion during the calmest summer days, give to the beholder an assurance of life and animation, when exhausted nature appears to be at the stagnant point.

Brown has quoted Sir W. Scott, who compares the constant motion of the leaves to the versatility of the softer sex:

"A woman! in our hours of ease
Uncertain, coy, and hard to please,
And variable as the shade
By the light quivering aspen made,
When pain or sickness rends the brow,
A ministering angel thou."

The Mountain Ash (*Sorbus aucuparia*) is

another very ornamental tree, of neat upright habit, handsome foliage of a deep green on the upper, and silvery whiteness on the lower side; its large bunches of bright scarlet berries, giving a lively and cheerful character to the out-door scenery during the greater part of the gloomy winter months.

In conclusion, Mr. Editor, I repeat, these desultory thoughts have been penned with no expectation of giving information to planters of experience, but to call the attention of those interested, to what appears to me a wanton destruction of fine trees, which we have seen in our daily rides or walks around this city, and also to point out to the uninitiated who are desirous of ornamenting their country residences, some of the distinctive characters and beautiful points of our apparently slighted, but really noble Forest Trees.

W. HEAVER,

Jan., 1850.

Reading Road Nursery.

HOW TO MISMANAGE A GARDEN.

Tools may be made use of, as well as any thing else, to show mismanagement; indeed, it may be taken as a rule that one of the best possible ways to turn out the worst possible work, is to make a bad use of implements.

The approach of the great season for digging and trenching and cutting and pruning and felling, makes it desirable that no more time should elapse, without the great rules for doing the worst with garden tools, being made intelligible to the meanest apprehension.

As to the pruning knife, in the first place, take care it is always blunt; there are many advantages in bluntness. If sharp, it may cut your fingers; it won't be so likely, if blunt. Then, a blunt knife suits a clumsy hand, for some dexterity is required in using a keen edge, and none is needed with a dull one. You may hack with the one, and that takes time, and gives you an opportunity of considering how your cut is to be placed, but you must be decided with the other, for the knife once put in action, the cut is inevitable,

and a bad manager cannot be expected to know how or where to cut, without trying three or four times before he makes up his mind.

A blunt knife shows, that a man has, at some time or other, been using it; but if it is always sharp, a suspicious master may fancy it is only kept for show. Besides, it gives him a chance of showing that he knows how to sharpen a knife, and it is certainly remarkable how a mismanager sets about that. You will see him rubbing away upon the whetstone, always drawing the blade backward, and polishing the sides with wonderful care. He knows better than to draw the edge towards him, or to keep that which is to cut in contact with the stone. He will tell you, that if he does so he will rub off the edge, in course.

As knives are intended for use, a clever chap will use his pruner for as many purposes as he can turn his hand to, a weed-grubber, a cheese-toaster, a pot-scraper, a wire-cutter, are all instruments for which the pruning

knife may answer, and if, afterward, it can not be made to prune, at all events it has been made to grub and toast and scrape and cut wire.

Then, again, you should never have your knife about you; it is absurd to expect that a gardener should always carry a pruning knife, no doubt he always wants it, but that is not to the purpose, it may do well enough for good managers, but a bad manager scorns such carefulness. The bad manager always carries his pruning knife in his great coat pocket, or in his jacket pocket, for this very good reason, that as he generally leaves his great coat at home, and very often takes his jacket off when he goes to work, he is sure not to have a knife when he wants one. Thus he has the chance of a gossip with his wife or somebody else, when he goes to look for it. Old-fashioned gardeners prefer keeping their pruning knife in their breeches, because, as they seldom work without that garment, they are certain not to leave their knife behind them. But who would be so ungenteel as to carry a knife in his inexpresables; good managers may, if they like, but a man of spirit, and a genius into the bargain, scorns such vulgarity and old maidishness.

What has been recommended for the prun-

ing-knife, should also be followed with other tools. If you have a mattock, be sure that it is put by blunt with wear, so that when you want it, you must wait till it is fresh pointed. In this way laborers get a bit of a holiday, and you yourself have time to consider well how the mattock is to be used.

In this manner your rakes should always have their teeth out, your spades be broken at the corners, and your scythes unset. As to scythes, indeed, if they must be used, be sure to have no scythe-stones, and no wipers, never roll the grass before mowing, never sweep it clean of stones that chanced to be there, but, on the contrary, hack the grass, and score it well, break the scythe edges, scold the stones, and take great care to blame every body but yourself. No doubt it is shameful that the grass should be tough, that the children should throw gravel on it, that worm-casts should blunt the edge of the scythes; the worst of all is, that there is no help for such things. Good managers may provide against them if they like, but you will no doubt think with all other bad managers, that it is much easier to swear at them. I was going to give you some advice about digging, but, upon the whole, I think you have enough for this time. K.

Gard. Chron.

GRAFTING THE ENGLISH WALNUT.

A correspondent asked us lately whether walnut trees could be grafted, and how? Two or three similar inquiries having been since made, we are led to suppose that the question is of general interest; as indeed it well may be, considering the frequent and very general failure of the walnut crops in this country, owing to the varieties in cultivation, not being hardy enough to ripen fruit properly in our cold summers. We, therefore, at once lay before our readers what is known or conjectured upon this subject, instead of delaying till the spring, when it may be forgotten or thrust aside by other topics.

There is a general opinion in this country, that the walnut tree cannot be grafted. English nurserymen sell seedlings only, which vary from plant to plant, in the period of their ripening and in the quality of their fruit; in their timber alone, is there any uni-

formity. Nevertheless there is no great difficulty in performing the operation of grafting; and therefore buyers are justified in expecting varieties of this nut to be offered to their choice in the same way as apples or stone fruit. There is no sufficient reason why thin-shelled, early, late, large and small walnuts should not be propagated with the same certainty as Ribston pippins and Codlings; in fact, they are so propagated in the continental nurseries, where they may be bought like other fruit trees. The French distinguish among others, the Mesange, or Tomtit nut, so called, because the shell is so thin that this bird pierces it to get at the kernel; the Late, which never flowers till frosts are over; the Noix de Jauge, a large coarse sort well known in this country as the French walnut; the Long-fruited of excellent quality, and a great bearer; and the Cluster, so called, because its

nuts hang in bunches, fifteen or twenty together; beside which, they have a prolific sort which bears in the second year, and which they call *Prœparturiens*. This last was produced in 1837 by M. Andre Leroy, the well known nurseryman of Angers. We should think it would be a fair speculation to procure from some respectable continental dealer a supply of grafted walnut trees for sale here. Care, however, would have to be taken that they are really grafted, for we perceive that seedlings of the prolific variety above alluded to, are this year offered by M. Leroy himself at £4 per thousand.

We believe that the first person who succeeded in this country in grafting the walnut was the late Mr. Knight, who described his method in the following manner.

"The fluid which the seeds of the walnut tree contain, when that is fully prepared to germinate in the spring, and which was deposited within it for the purpose of affording nutriment to the seminal bud or plumule, in the preceding autumn, is sweet, as in a great many other kinds of seeds: but during germination this becomes, in the seed of the walnut tree, bitter and acrid. Similar changes take place in the sap which is deposited for analogous purposes in the bark of the wood of the walnut tree, during the germination of its buds; and I was led by the discoveries of M. Dutrochet to infer the probability, that the sap during, and subsequent to, its chemical changes, might acquire new and more extensive vital powers. I therefore resolved to suffer the buds of my grafts, and those of the stocks, to which I proposed to apply them, to unfold, and to grow during a week or ten days, then to destroy all the young shoots and foliage, and to graft at a subsequent period. A very severe frost on the morning of the 7th of May saved me the trouble of destroying the young shoots; but it deranged my experiment by killing much of the slender annual wood, which I proposed to use for grafts; so that I found some difficulty in choosing proper grafts. The swelling of the small, and previously almost invisible buds within a few days, enabled me to distinguish the living wood from that which had been killed by the frost, and the stocks were grafted upon the 18th of May.

"My grafter had more than once been previously employed by me to graft walnut trees

in various ways, and never having in any degree succeeded, he did not seem at all pleased with the task assigned him, and very confidently foretold that every graft would die; and I subsequently found that he had insured, to some extent, the truth of his prophecy, by having applied grafts which were actually dead. The whole number employed was twenty-eight, and out of these, twenty-two grew well; generally very vigorously, many producing shoots of nearly a yard long, and very great strength, and the length of the longest shoot exceeding a yard and five inches. The grafts were attached to the young (annual) wood of stocks, which were between five and eight feet high, and in all cases were placed to stand astride the stocks, one division being in some instances introduced between the bark and the wood, and both divisions being, in others, fitted to the wood or bark in the ordinary way. Both modes of operating were equally successful. In each of these methods of grafting, it is advantageous to pare away almost all the wood of both the divisions of the grafts; and therefore, the wide dimensions of the Medulla in the young shoots of the walnut tree do not present any inconvenience to the grafter.

"No difficulties will henceforth, I conclude, occur in propagating varieties of walnuts by grafting; and I am much inclined to believe, that different species and varieties of oaks may be successfully grafted by the same kind of management."

The French graft the walnut in a variety of ways, and especially prefer ring grafting. They find it necessary, however, that the sap should be in full flow, whatever the method they employ. Their way of ring grafting is this. When the sap is running freely, they remove from the scion a ring of bark on which there is a good bud; and it is immediately transferred to the stock.

When it is properly fitted, the lips of the wound and the edges of the ring, being accurately adjusted, the whole is secured with grafting wax, prepared by melting together five-eighths of pitch, one-eighth resin, one-eighth yellow wax, one-eighth tallow, with the addition of as much fine brick dust as will give it consistence; it is used as hot as the finger can readily bear it. This sort of graft is never tied. In this way the French succeed in grafting old trees which have been

headed back; but they, in such cases, operate upon the shoots which such trees throw up from the pollarded head.

In addition to these modes, we would suggest the trial of herbaceous grafting, the best of all in theory, and by far the best in prac-

tice also, when circumstances admit of its application. But perhaps some of our correspondents have had practical experience in this matter, in which case, we dare say, they will favor us with the result.

DR. LINDLEY.

GRAFTING FRUIT TREES.

NEW METHOD.—Mr. Vard has made known a new method of grafting, purporting to be discovered by himself. The operation, which is performed in the spring, is as follows: a shoot of the previous year, having one or two eyes, is taken and shaved into a longish cylindrical form, immediately below the lower eye; a hole two or three inches deep, and as large as the graft, is then bored in the stock; the graft is placed in this hole, and is driven in until it fits it exactly, leaving no space between itself and the stock. If this is done, the libers will be in closer contact, and the joining of the graft more sure. The junction is covered with grafting mixture, and the operation is finished. The commission which have inquired into this matter, have come to the conclusion, that M. Vard cannot claim to be the inventor of this method. They find it mentioned in the treatise on grafting, by André Thouin, published in 1822, under the name of the Plug Graft, which, according to the author, was used by the Romans in grafting their olives and vines, and is mentioned by Terence, the agricultural writer of those days. The commission have endeavored to ascertain whether this plan of grafting is likely to be of any importance. M. Vard says it may be used with advantage; first, in filling up with branches, bare spaces on the stems of pyramids; secondly, in introducing on lateral branches, fruit spurs, where they are absent. As to the first of these uses, the Commission have remarked that the grafts of last spring resemble fruiting branches more than common branches. They think that this is owing to the almost horizontal position of the graft upon the stock, the ascent of the sap of which is consequently obstructed, and they decidedly prefer Richard's side grafting, heel grafting or spur grafting, whenever this is possible, if the object aimed at is the filling up of the spaces left in pyramids. With regard to the second advantage attributed to this method, the Commission think that it is

real and important. The plug-graft is easy of application, requiring no ligature, is quickly inserted, and is by no means unsightly.

These advantages the Commission think will cause the present plan to be preferred to others now in use, when the object is to obtain fruit-spurs from branches which have them not.—*Revue Horticole*.

SUMMER GRAFTING.—M. Loiseau employs, for cleft and crown grafting, in April, May and June, eyes, which at the base of the shoots, buds or branches of the preceding year, have not been developed. After the end of June, when the young shoots have become a little hard, they may, after their leaves are cut off, be grafted just as the same branches would be grafted in the following spring. If the shoots are still too tender, it is as well to varnish them with grafting wax. M. Loiseau made, in this way, from the month of May to September, more than 150 plants, both from seeds and stones, and he did not lose more than one-fifth, although his experiments were made on a very dry soil, and no care was taken to protect the graft from being destroyed by birds, or by the dryness produced by the great heat of the months of June and July. He even succeeded in cleft-grafting an apricot in July. In May, two out of thirteen grafts failed; in June, three out of twelve; in July, three out of fifteen; in August, none out of twelve. It may be as well to remark, that a tree cleft, grafted in May, June, and even early in July, very nearly overtakes that grafted in the spring, and there is very little difference between the two at the end of the year. Moreover, the cleft graft, if made in summer, begins to grow after a week, while the bud does not begin to grow till the end of a fortnight. The cleft graft has also this advantage over the bud—that the former does not require the bark to be separated, indeed, the less sap there is in this graft the better.—*Comptes Rendus*.

From the Transactions of the Cincinnati Horticultural Society, 1849.

THE ROT IN GRAPES.

GENTLEMEN: I objected to the report of our Fruit Committee, assigning, as the cause of the rot in our grapes, "their location being in confined situations, not fully exposed to the air, and their proximity to orchards or woods." My experience is the reverse, as regards a full exposure to the air, though I do not consider that the location as to air, either causes or prevents the rot.

Most of my vineyards at Tusculum are on the top and sides of a high hill, and on its sides, fully exposed to the sun and air, and facing east, west, north and south, with no tall trees in the vicinity. Yet in these vineyards the rot has prevailed, and this season two-thirds of the crop was lost. The sub-soil is a stiff clay; and to this I chiefly attribute the rot. Among my vines near the foot of the hill, where the ground was more porous, there was less rot; and in the bottom, or near it, where the rain immediately sunk deep in the earth, there was no rot. And this I have found to be the case at other vineyards. Where the sub-soil was a compact clay the rot prevailed. Where sub-soil was mixed with sand or gravel, or where it was porous, there was no rot.

I have for the past five years believed that the land in Kentucky, on the opposite side of the Ohio, would be preferable for the grape culture to our own. The soil on that side of the river is in many situations sandy, and the rain passes freely through it. The consequence is, they supply our market with strawberries, a week earlier than we can raise them on our side of the river; and most, if not all their vineyards are planted in soil of this character; and I have heard of no serious loss by the rot on the Kentucky side. On inquiry of our intelligent Germans, I find their experience coincides with mine. In their vineyards, the rot injured them the

least where the ground was porous, or the water, from the declivity of the ground, passed off speedily; or if the sub-soil was a clay, it was mixed with stone, which caused the water to sink speedily. One of my vineyards at Tusculum suffered but little from the rot, and this was on land where the sub-soil was a stiff damp clay, and near to the forest. The German who cultivates it is a perfect "swoab," a very ignorant man. He however was able to give the reason for his escape from the rot. He "prepared his ground, and planted his grapes just so as he did in Germany." His vineyard is on the top and sides of a high hill, descending both to the north and south. He trenched his ground, throwing the earth from each side, making beds fifteen feet wide, with deep trenches on each side, and the trenches having a quick descent for water down the hill, north and south. On these ridges he planted three rows of grapes. The consequence was, that no water lay on the surface, or had time to saturate the clay beneath, but speedily passed into the trenches, and from them rapidly down the hill. On inquiry, I learnt the part of Germany he came from, had a sub-soil of stiff clay, in consequence of which all their vineyards were graded in like manner. Nine-tenths of our "swoabs," in all their business and pursuits in life, must do it "just so as they did it in Germany," without any change for soil or climate; and the result is not always as favorable as it was with my tenant.

But I would not be understood as saying, that other causes may not also operate more or less in causing the rot. One reason for believing that other causes may operate is, that previous to the last six or eight years, we had much less of the rot, yet our soil was

then the same, and our rains as frequent and heavy. But the rot should not discourage us. After losing two-thirds of their crops, my tenants, the past season, made upwards of nine thousand gallons of wine, and most vineyards escaped much better than mine; many had no rot whatever.


In Germany our vine dressers assure us the crop is not more certain than with us, though they are but little troubled with rot. Their seasons are much shorter than ours, and their crops are often destroyed by early frosts. My wine cooper informs me that before he left France, they had lost four crops in succession, and many of the poor, owning small vineyards, had cut them up and planted vegetables in their place. I am informed by intelligent Germans, that the same would be done in Germany if the poor vine dressers were allowed to do it. But the vine dressers, both of Germany and Spain, have a greater evil to contend with. In a season when the yield is abundant, so low is the price of wine in Germany, that if you will take two empty casks to the press, you will be allowed to carry away one of them filled with the juice. In Spain the evil is still greater. Mr. Samuel E. Foote, who was many years engaged in purchasing wine in Spain, informs me that he paid the cooper thirteen dollars for wine pipes, and the vine dresser five dollars for filling them.

Mr. Rehfuß recently imported from Germany the instruments used there for testing the saccharine quality of the must, and the strength of the wine when fully fermented. The result surprised me. Our must this season, ranged from 80° to 101°. I am informed by intelligent German vine dressers and

wine coopers, that in Germany it ranges from 70° to 90°. Many are under the impression, that the grape further south possesses more of the saccharine principle than it does with us. I believe this is never the case; and if it is, it is more than counterbalanced by their vintage coming on in the heat of the summer, and the grape possessing a larger portion of the fermenting principle. Very few, if any, of our wine coopers now add sugar to the must; yet our wines, in tight casks and cool cellars, keep sound for years, without any addition. But the casks should be kept full, to guard against accident.

I corresponded for several years with Mr. McCall, who cultivated the grape for wine, near Dublin, Georgia. He informed me that he was in the constant habit of adding from 1 to 2½ lbs. of sugar to the gallon of must, of the Schuylkill Muscadell, (Cape) and Catawba grape; and frequently found it insufficient to prevent his wine from running into the acetous fermentation. I know, that Mr. Herbemont of Columbia, South Carolina, was in the habit of adding as much sugar to his must, yet when his wine was offered for sale at public auction soon after his death, most of it was turned to vinegar, or undergoing the acetous fermentation.

The pure, dry wines of Germany weigh from 4° to 7° in general. The wines of Madeira weigh from 20° to 25°. This is occasioned by the quantity of brandy added. In their hot climate, I believe, it is necessary, to prevent the acetous fermentation. If not, they would not add any brandy, or not so large a quantity. N. LONGWORTH.

 SCHOOL GARDENS were established about a century ago by the Quakers, at their school at Ackworth, in Yorkshire, and the plan is carried on to the present time. Each boy has a certain portion of seed allotted to

him for his ground, the cultivation of which is found highly beneficial to his health and interesting to the youthful mind. A similar plan has been adopted for ages at the convents.

THE CRANBERRY.

BY SULLINAN BATES.

1st. Select a situation for your Cranberry field on a clay soil, on such as is not liable to bake, or on a dark loam soil, or on all moist soils where there is a mixture of sand, mostly of reclaimed lands; such as can be made moderately dry, are well adapted to grow the Cranberry. In fact, most all soil that is suitable to grow the potato is well adapted to grow the Cranberry, (yet the first mentioned soils would be preferred.) I think there are portions on most of the farms situated in the middle States, and their vicinity, that are well adapted to grow the Cranberry, and I should propose to all desirous of commencing the business, to put their plants on different parts of their soil, and by so doing the better soils may be ascertained. As far as I have ascertained, there are *three* varieties of the Cranberry, viz: The Barberry, the Cherry, and the Bell—I have never known of any other variety of the berry that would naturalize to dry soil except the Bell Cranberry; this species of the berry grows much in the form of an egg—it is inclined to grow in the wild state, on the borders of Cranberry bogs, spreading its way to upland soil; this species is much larger than the others, in its wild state. Persons engaging in the cultivation of the article, should commence with the last mentioned species, and by commencing with those that have been cultivated and naturalized to a dry soil, they will much sooner accomplish their object, and with much less trouble and expense, as the plants multiply and increase abundantly.

2d. Prepare your soil the same as for sowing grain, by plowing, harrowing and making your soil even; then mark it out in drills, eighteen or twenty inches apart, putting the plants in the drills, five or six inches apart—hoe them slightly, at first, till the roots become clinched, and afterward no other cultivation is needed. The plants may be expected to run together and cover the whole soil in two or three years. The Cranberry grown by cultivation usually yields from 150 to 400 bushels per acre; its fruit is two or three times as large as the wild fruit, and of a beautiful flavor; it readily keeps sound from its harvest time until the time of harvest again. The fruit is generally gathered in

rakes, made for the purpose—one man will generally gather from 30 to 40 bushels per day, with the aid of a boy to pick up the scattering fruit.

Letter from Mr. Boswell.

The common American Cranberry (*oxycoccus macrocarpus*) is found growing in a wild state in swampy soils, in the Eastern, Middle and Western States. The first account we have of the cultivation of this fruit, is by the late Sir Joseph Banks, who in 1813, produced from a bed 18 feet square, $3\frac{1}{2}$ Winchester bushels; being at the rate of 460 bushels to the acre. Capt. Henry Hall, of Barnstable, Mass., has cultivated this fruit for the last twenty years. His method is to spread on his swampy ground a quantity of sand—this is to kill the grass; but where sand is not at hand, gravel will answer the same purpose. He then digs holes four feet apart each way, and puts in the holes sods of cranberry-plants about one foot square.

As this plant naturally grows in a very wet soil, it is generally supposed it will not thrive in a dry soil; but this idea is erroneous. Mr. Sullivan Bates, of Bellingham, Mass., has cultivated the Cranberry on a dry soil for several years with the utmost success—having produced 300 bushels to the acre on several acres, and his fruit double the usual size.

From my own knowledge of the Cranberry for the last thirty years, should I design commencing the cultivation of this fruit on an extensive scale, I would try it on both swampy and dry soils. I would drain the swampy soil, plow it as early as possible in the spring, and set out the plants on the plan of Mr. Bates.

To show the rapidity with which the Cranberry plants increase, I will add this statement from an English work on Fruits: An English gentleman had only a few plants, these he cut in small pieces or cuttings, and set them out in a green-house. In the spring he prepared some swampy ground by spading it twelve inches deep. In a bed 150 feet long, and 4 wide, he set out seventy-five cuttings in one drill through the length of the bed, putting the cuttings two feet apart in

September—it is gathered with wire-teeth the drill, and yet in three years the plants completely covered the ground.

In Massachusetts the Cranberry crop is once in a few years cut off by the late spring frosts. This may be prevented where a meadow is so situated as to be flowed. The water should not be over one or two inches deep on the Cranberries, nor be left on later than the last of May in this climate. If kept on till it becomes warm, it will kill the vines. Perhaps the best management would be something as they flood rice-fields at the South, or water meadows in England—let the water on when the weather is coldest, and then take it off as it moderates. Sometimes, in the Eastern States, the Cranberries are destroyed by a frost in September; where water is convenient and plenty, the meadow could be flowed on cold nights at this season, as well as in the spring.

Rakes are now made for the express purpose of gathering cranberries, and although these rakes tare the vines somewhat, yet the crop is not diminished by raking; on the contrary it has been increased. Some years ago, a gentleman in Massachusetts commenced raking his little patch of one-fourth of an acre. The first year it produced 12 bushels, the

next 18, the third 25, and so on till his last harvest, when the crop amounted to 65 bushels. This increase is easily accounted for by the method of gathering with rakes—the pulling up a few of the vines loosens the ground, and though not intended, yet in fact the raking acts as a partial cultivation.

To promote the cultivation of this fruit, the American Institute is making arrangements to supply Horticulturists with plants early in the spring, in either large or small quantities; and I would recommend those wishing to purchase, in this vicinity, or New York, to get their supplies in this way.

Gen. Chandler, of the New York Farmers' Club, says: "At the request of Mr. Sullivan Bates, of Bellingham, Mass., I present to the Club, Cranberry plants, some with their great crop of fruit on. A few years ago he first introduced this fruit, produced by his new method—transplanting from low grounds to high. His success has been complete; he has gathered from one acre, about 400 bushels of Cranberries in a season! He plants them in drills, twenty inches wide, in hills seven inches apart. The soil must be such an one as does not bake.

Bellingham, Norfolk Co., Mass.

HUMUS AND MANURES.

BY MR. E. SOUBEIRAN.

E. SOUBEIRAN has addressed to the academy the resumé of his treatise on humus, and the part which manure plays in the nourishment of plants; this treatise having received the prize at the meeting of the Central Society of Agriculture of the Seine Inférieure.

1. The woody fiber which undergoes decomposition on contact with air and moisture, is converted into humus, and at the same time furnishes carbonic acid, which is perhaps absorbed by the roots of plants.

2. The proportion of carbon in humus and manures never exceeds 56 to 57 per cent. This is the extreme limit which the decomposition of woody fiber can attain to in contact with air and moisture.

3. Pure humus contains $2\frac{1}{2}$ per cent. of nitrogen, which appears to be essential to its composition.

4. Humus is scarcely altered in contact with air.

5. Humus, scarcely soluble by itself in water, acquires solubility by its combination with lime, but the principal agent of its solution is the carbonate of ammonia, which reacts equally on free humus, and on humus combined with calcareous matter.

6. Humus rendered soluble is absorbed by the roots of plants; it serves in a direct manner for the nourishment of the plant.

7. Humus has also a favorable action on vegetation, by attracting and retaining the moisture of the air and ammonia by facilitating the solution of the earthy phosphates, by meliorating the physical qualities of the soil, and by moderating and regulating the decomposition of decaying animal matter.

8. Manure par excellence is that which at

the same time contains the earthy and alkaline salts, ammoniacal salts, animal matter in a state of putrefaction, humus already formed, and vegetable remains in a state of transformation.

9. In valuing a manure, it is necessary to take into consideration not only the quantity of nitrogen furnished by analysis, but also the state in which that nitrogen exists in the manure state; also the state of ammoniacal salt, or of the putrescible animal matter, and the state of the soluble ammoniacal salt, or the ammoniacal magnesian phosphate.

10. The analyses of fermented dung which have hitherto been made are defective, in that they have not taken into calculation the loss

resulting from the action of carbonate of lime on the salts with an ammoniacal base, during the drying of this manure. The result is, that the tables which have been published representing the proportion of nitrogen in manures, give only approximate results.

11. The comparative value of manures can not be estimated by simply reckoning the quantity of nitrogen afforded by analysis; because, on the one hand, the nitrogenous matters are not the only active principles of manures; and, on the other hand, because the value of manures depends much on the state of the nitrogen contained in them; and consequently, it is impossible to frame a table of equivalents for manures.

AROMA OF WINE.

DR. WARDEE: *Dear Sir,* To what cause can we attribute the great difference in the aroma and flavor of Catawba wine of our last vintage. A large portion of the wines I have seen this winter, of good quality, in other respects, gave no evidence from their aroma or flavor, of their being from the Catawba grape. Many persons suppose the aroma and flavor, as well as the color, is in the skin, and if not brought out by fermentation in the berry before vintage, that the skin should be mashed. It is true of many fruits, that much of their flavor resides in the skin. But I believe I have seen wine of high Catawba flavor, where no fermentation had taken place, and where the grapes were put on the press as they came from the vineyard. Mr. Remelin is of opinion that it arises from a difference in the soil. Of this I have doubts, as I think I have observed the difference in different years, in the same vineyard. Where a wine is deficient in this peculiar muscadine flavor, it should be mixed with one that possesses it. I have this winter seen several samples of wine, fully fermented, where the wine weighed nothing, the saccharometer standing at 0°. Yet I was assured the wine was made very late, and the grapes

ripe. Mr. Remelin informs me that he has often observed this in Germany, and attributes it to a frost passing over the grapes before gathered, that gives peculiar qualities to the saccharine principle in the grape, and prevents its conversion into spirit. In all the instances where the wine was deficient in strength and flavor, there had been a frost before the vintage; yet I have seen some strong wines where there had been a frost, but they were deficient in flavor. In some parts of Germany frosts are deemed injurious, in others they even delay their vintage till there is snow. I presume some varieties of grapes are injured by frosts, while others are not. This is the case with apples. Last fall's vintage convinces me, that our Catawba grape does not increase in richness, by hanging on the vine, after cold weather has deadened the leaves, and stopped the flow of sap to the fruit; on the contrary, they sustain an injury. Our grapes did not ripen well last fall. The spring was backward, and early cold weather stopped the flow of sap.

I would here remark, that all vine dressers who have large vineyards, should have a small still, and convert the marc and sediment into brandy. I bought some from one of my tenants,

five years old, for which I paid him six dollars per gallon. I had three barrels some years older, but its quality was so fine, that it was drank up by servants, when I was from home. I do not know whether brandy made from the marc and sediment, is as good as that made from the wine. But brandy from the wine is of superior quality, as the Catawba flavor is retained, when the wine is converted into brandy or vinegar. From five to six gallons of wine are required to make one gallon of brandy.

We are now abandoning the cultivation of the Isabella. It makes a superior sweet wine, and for that, is worthy of cultivation. I have seen the fruit of this grape finer here than at the East, but we cease to cultivate it, because it is inferior to the Catawba, Herbemont, Ohio, Missouri, and some other grapes that suit our climate, but do not succeed further north. In saying that the Diana grape, grown in the vicinity of Boston, was far inferior to our Catawba, (in which opinion I was sustained by thirty of our horticulturists,) I did not express the opinion, that it might not prove a valuable grape here, and further south. If a seedling of the Catawba, it may prove even superior, as it surpasses the Catawba to the north. I would urge on our vine dressers the cultivation of the Missouri, and the Herbemont grapes. They both make a superior wine. The first will make a wine resembling the Madeira, and I deem equal to it. The grape is hardy, but of moderate growth. I would plant the roots about three and a half feet between the rows, and two feet six inches from plant to plant, and leave but little bearing wood, and

but few young shoots. The Herbemont will do best in a porous or sandy soil. It is hardy and of vigorous growth. I believe a shoot might be made to grow fifty feet in a season. The wine in its aroma and flavor resembles the Spanish Manzanilla, and I deem it a superior wine. Both of them are fine table grapes.

In past years, as the quantity of wine made was not equal to the home demand, even poor wine met a ready sale. But times are changed. Our vineyards are yearly increasing, and we must seek a foreign market. We should be very careful not to leave too much bearing wood. Our Germans are anxious to obtain a large crop; have an excess of fruit, and the result is, it does not ripen well. Great care and neatness must hereafter be observed in the manufacture. All green, rotten and defective berries must be carefully picked out. None but the ripest bunches gathered at the first vintage. Press clean, casks clean. Even a brandy cask can scarcely be cleaned, so as to prevent an injury to the flavor of the wine. A cool place for fermentation. A syphon in the bung, passing into a can of water to preserve the aroma, flavor and strength, during fermentation. After the wine is clear and racked, a cold cellar, and the cask always kept full. There are very few that have suitable cellars, and I would therefore advise them to sell their wine as soon as clear. Without a cold cellar, and great attention, no pure wine will keep good in our warm summers. Yours,

N. LONGWORTH.

Cincinnati, Jan. 20th, 1850.

SULPHATE OF AMMONIA.—Half an ounce of this salt to each gallon of water is recommended, after numerous trials, as an application to Geraniums, Fuchsias, Peas, Dahlias, and newly-potted greenhouse cuttings. It greatly promotes their vigor, but must not be applied oftener than once in ten days.—*Gardeners' Almanac.*

ROSES.

THE exhibition of roses in the autumn, are very likely to deceive many buyers, who see great beauty in the bunches put up at a show, because, however diversified and interesting they may appear when gathered and bunched, many of the most inviting are of bad habit, and do not look well in the tree; whereas, my old favorite, Fellenburgh, would look poor beside the rich and double varieties we see in bunches. Those which I prize are of fine habit. I have found one of the best in Madame Desprez, which is, I have no doubt, now in full bloom in every situation; a rose exceedingly double, a free grower, with healthy bright foliage, and showing constantly a noble head well furnished with flowers, of a delicate and rather pale color. It is not, like some of the most beautiful, bare of bloom, showing here and there a splendid flower on the one end of a vigorous rambling shoot, and for a long period bare altogether; nor is it, like others, equally beautiful in a bunch, but hanging on weak footstalks, as if they were blighted when on the plant. Next to Madame Desprez, and forming a fine contrast for color, I have Pourpre Parfait, in some gardens called Pourpre Farfait, which I take to be a mistake. This is a rich double rose, an abundant bloomer, deep purple crimson, and like the others I have mentioned, forming a fine head well furnished with blooms. And next to them I have Noisette Jaune Desprez, with flowers at the end of every shoot; and though not so gay as many others, making a very good variety; and Aimée Vibert, literally covered with its snow white flowers.

Now, here I have white, pale rose, crimson, purple and yellow white, all richly flowering the whole season, and at this time so striking, that although I have a hundred varieties, many of them highly esteemed, I could honestly wish them to be changed, that I might see

these five repeated all through the garden. I have straggling flowers on Mrs. Bosanquet, Mrs. Elliot, Madame Laffay, and twenty others; but they form no feature, and do not assist the garden, however well they may have appeared at one period for a short time; therefore, with all these claims, and they have many, they do not, like the others, enliven the scene for months together. I wish, therefore to call the attention of all those amateurs who delight in roses, to the state of these collections now, and beg them to take a walk around their gardens for the purpose of contrasting those with little or no flower with such as are covered with bloom, and to ask themselves whether any amount of beauty for a month compensates for the barrenness the rest of the year. I shall follow up this subject, and by way of finishing my remarks on roses and rose gardens, will give a list of those which come nearest to my notions of continuous blooms; for although I have been furnished by very competent persons with lists recommended to me, and purchased for the quality alone, I confess that I cannot rank one-fifth of them among my pets whose features are always the same. I admit that most of those supplied to me as perpetual blossoms, are rarely out of bloom; but two or three flowers on a large straggling head do not supply that striking and desirable feature, which I consider invaluable in a rose tree. I intend to turn out of my rose borders all that will not keep a constant and abundant bloom. I must find a place for many of them, for the individual roses are splendid; but I want no more in my flower garden than will keep up the main features of the rose the greater part of the summer and autumn. I will assign the best of the others a quarter of less importance to the general appearance.

Gard. Chron.

From the Family Visitor.

HABITAT OF PLANTS.

IN the beginning the earth was clothed with verdure. The herb and fruit tree yielding seed after their kind, have continued to replenish the soil, and we find, that wherever man has had a habitation, there also is the

habitat of plants. It seems to have been one great design in the creation of vegetable and animal life, that vegetation should be co-extensive with man's existence, to furnish him the means of sustenance and protection,

to heal his diseases, and alleviate his wants—to elevate his mind and refine his taste by the contemplation of their beauties, and in the study of their history, structure and various laws. They seem not only to be co-extensive with man's existence, but with the surface of the earth. Valleys, mountains, hills and plains—the verdant south enriched by fertilizing showers, and the frigid regions of the north clad in perpetual snow, the rock, the desert—dark caverns of the earth and beds of seas and oceans—all produce vegetation in some of its various forms. But in the distribution of plants, nature has wisely classed and arranged them, and set bounds to their locality. The torrid zone produces the most luxuriant fruits and the greatest variety of flowers. As we advance to the higher latitudes, they gradually diminish in luxuriance and beauty, until we reach the extreme north, where they almost, if not entirely cease to exist. Latitude not only affects vegetation as a whole, but there is a northern and southern limit of growth for each of the several species of plants. So that, as an author has said, "every climate has not only its peculiar degree of vegetable activity, but also its peculiar species." The wisdom of the Creator has caused such a concurrence of influences to affect the growth of plants, that each locality almost produces its peculiar species, and these are ever such as are best adapted to the well being of its inhabitants.

In the torrid zone, nature has abundantly furnished the species of plants most important and grateful as food in that warm, relaxing climate, the tropical fruit being well adapted to promote the health and comfort of those who reside there.

In the higher latitude where man requires more muscular strength to meet the demands of his nature, where vigorous exercise is necessary to keep up the vital action of his body, clothes to protect him from the cold, and dwellings to shield him from the chilling blast of winter, we find all the circumstances favorable, for the cultivation and abundant growth of those cereal productions which contain the muscular element to meet this requisition, and for further answer to this demand we have only to cast our eyes abroad upon the green carpeting of earth, which, undergoing an appropriate process in nature's laboratory, is converted into animal muscle. The

farmer's cheerful labors are here yearly repaid by the waving grain with which his fields are clothed. His herds and flocks graze upon the verdant hill side in summer, and receive an abundant supply from the well cured hay in winter. As the traveler ranges the hills and valleys of New England, or the broad prairies of the "far west," his eye is met on every side by these rich supplies of nature.

The constituent elements even of each species of plants, will vary according to the wants of its consumer in different latitudes of the belt where it grows. The constituents of food adapted to the constitution of a native of Quebec will be found to exist more abundantly in that latitude, than in the same species at St. Louis, where the system requires less, or a different nutriment. This fact may be seen by noticing the Indian corn in the different latitudes of its growth. Corn growing near the tropical regions is composed almost entirely of starch. As we advance toward the northern limit of its cultivation, this element diminishes until it occupies but a small portion of the kernel, its place being supplied mostly with oil and sugar to maintain the warmth of those who feed upon it in that colder climate. An invalid traveling southward on horseback for the benefit of his health, finds at the commencement of his journey, a sufficient supply of proper food for his horse, but as he proceeds it is less readily furnished, until finally he is not surprised to find his faithful steed making his morning repast upon *corn* instead of oats. Still this grain, which a farmer in northern Ohio would almost as soon his horse would fast as feed upon, becomes a very good substitute for the other species of food by growing in a southern soil, and consequently containing nutritive elements in different proportions.

Those plants most useful to a large share of the human family, most naturally adapt themselves to varying circumstances, and are wisely distributed in different climates, their qualities becoming so changed by cultivation, as to be well adapted to the wants of sentient beings where they grow. Others less useful, and without this power of accommodation to circumstances, are comparatively rare. It is worthy of remark here, that the delicate and unassuming flowers, though often considered to be of little worth, are to the refined intel-

lect, gifts of value bestowed by an unseen hand, and widely diffused through almost the entire vegetable kingdom. They not only display the skill of Him who formed them, and variegated their petals with richly tinted colorings, but by their seeming gentleness,

they exert a softening and refining influence upon the human mind.

Without considering this subject further, let me simply say, that in this as in every other department of nature, God has ordered all things well. M. E. ROBERTS.

From the Gardener's Chronicle.

Musa Cavendishii in the Polynesian Islands.

MORE than ten years ago, the late Rev. John Williams paid a short visit to Chatsworth, in order that he might, if possible, ascertain the most successful method of packing and exporting plants and seeds to great distances, and also at what period or stages of growth it was most advisable to have them removed for that purpose; for, as that gentleman was about to be entrusted with a mission to the Polynesian Islands, he was exceedingly anxious to take something over with him, which, on its arrival in those parts, might prove permanently beneficial to the inhabitants. His Grace, the Duke of Devonshire, having most kindly given permission to supply, from the gardens at Chatsworth, anything which might be deemed suitable for the purpose, Mr. Williams consulted me as to the kinds of plants I would recommend. I suggested that it would doubtless prove one of the greatest blessings to the inhabitants of those far distant and little known lands, if the Chinese Banana, (*Musa Cavendishii*), could be safely transplanted and established there, as from its dwarf growth, it might be cultivated to any extent, and in almost any situation where the taller growing kinds could not exist, on account of the violent tornadoes, which at various times sweep down nearly every lofty species growing there; also an immense number of plants might be grown on a very limited surface of ground, and consequently, the production of healthful and nutritive food, would in a few years become abundant, and thus with a very moderate attention, the overplus might, by exportation, prove beneficial to the inhabitants; and lastly, encouragement would be given to cultivation, which would, in a few years, pave the way for the introduction of many other of the useful arts of civilized life.

Subsequently, Mr. Williams sent to Chatsworth, his son, who remained here for a month,

making observations and taking such instructions as he thought would prove serviceable to him. On his departure, two cases of plants were prepared to be taken out with him, in accordance with his Grace's wishes; one of these packages was filled entirely with young plants of the *Musa Cavendishii*, and the other contained several other plants, which were thought likely to prove of real utility. More than ten years have rolled away since this transaction took place, and from that time to the present, little has been known or heard of the affair, beyond the arrival of the plants at their destination, and the melancholy close of Mr. Williams' merciful mission.

After the lapse of so long a time, when the circumstance had become partly obliterated from the mind by more recent matters, it was with no small satisfaction that I read in the Samoan Chronicle, (which has been kindly sent me from those Islands,) the following interesting accounts of the spread and great utility of this *Musa*, originating from the stock then introduced—a statement fully according with my anticipations, and serving to show that the cultivation of this plant has been carried out in a most praiseworthy manner.

The great success which has attended this experiment, promising, as it does, to be of so much ultimate importance, will encourage all persons who may have opportunities of rendering such assistance, to do so. It has stimulated me to further exertion in this way, whenever such may appear necessary.

The Samoan Chronicle says: "He who introduces but a single plant into a country, may be considered a public benefactor. We look with interest on the magnificent orange and tamarind trees which still stand at Point Venus on Tahiti, planted by Bligh, and on the shaddock tree, which, till lately, stood at Huahine, planted by the hand of Cook. But

the most humble native teacher, who now conveys to other islands the orange, the lime, the banana, sweet potato, pine, custard and papan apples, etc., is no less worthy of the thanks of our country than the greatest of our navigators. It is interesting to observe, that when these worthy agents of our missionary society bring on board the mission ship their little odds and ends of property, to embark on their mission of mercy to other islands, they have almost invariably a box of plants, or a parcel of roots and seeds. It must not be thought that the islands of the Pacific are now the solitary abodes they once were. They are visited by hundreds of whalers and traders, and consequently, it is of the greatest benefit in preserving the health of their crews, to be able to get fresh supplies of vegetables and fruits. At the same time it confers a benefit on the natives, by giving, in exchange for their produce, our hardware, cutlery and cottons. The benefit is even more extended in opening up markets for our home manufacturers.

"In after years it will be interesting to know who first conveyed to the several islands many of the finest tropical productions. Even now, short as the period is, it would be difficult to ascertain who first introduced many of them.

"Of all the foreign plants which have been introduced into Samoa, none have been more extensively propagated and valued than a species of Banana, previously unknown in the south seas, although in Samoa alone upward of fifty different species of the *Musa* are found. From the excellency of its fruit and its great weight, together with the adaptation of its lowness to resist violent gales, it promises to take the precedence of every other variety usually cultivated. Some notice of its history, therefore, is worthy of record.

"When Mr. Williams, our late lamented

missionary, returned from England, in the 'Camden,' in 1838, his Grace, the Duke of Devonshire, kindly supplied him with some cases of plants, in one of which was one designated 'Chinese Banana,' (most probably the *Musa Cavendishii*, the origin of which is said to be the Isle of France.) Mr. Williams not having a settled place of residence for some time after he landed, the cases were left under my care. Little vitality seemed to remain, but anxious to preserve, if possible, some of them, I had them carefully transplanted into my garden. This Chinese Banana was the only one which survived. In about twelve months it produced a bunch weighing nearly one hundred pounds. From this single plant have sprung the thousands to be seen everywhere in Samoa, and they are fast spreading in other groups east and west. It is surprising to see in the short space of ten years a plant so extensively propagated. But when we calculate by geometrical progression what a plant, which will average but six suckers a year, will eventually produce, the result is amazing.

"The value of the Banana in these seas can scarcely be estimated. What Baron Humboldt says of it in Mexico may be quoted here and applied to Samoa. He doubts whether there is any other plant on the globe which, in so small a space of ground, can produce so great a mass of nutriment. Eight or nine months after the sucker has been inserted into the earth, the Banana begins to form its clusters, and the fruit may be gathered in less than a year. A spot of 1076 square feet may contain at least from thirty to forty plants, which, in the space of a year, at a very moderate calculation, will yield more than 4410 lbs. avoirdupois of nutritive substance. The produce of the Banana is to that of wheat as 133 to 1, and to that of potatoes as 44 to 1."

W. MILLS.

Gard. Chron.

Productive Pear Tree.

The *Phren. Journal* notices a pear tree near Vincennes, which is about forty years old, more than three feet in diameter at one foot above the ground, and which, in 1834, yielded one hundred and eighty-four bushels, and is always enormously productive.

Will not some horticulturist of that region send us a memoir of that tree?—and also ascertain whether there be any *Catalpa* posts still standing, which were planted by the old French settlers. No correspondents have yet appeared from that thriving city.

MY FLOWERS.

I HAVE never been able to decide whether flower-beds should be placed upon grass or gravel. In the summer the coolness of a lawn is delightful to the eye and to the foot, but in winter the wet and sponginess of the grass frequently prevents a lady venturing among her borders, and thereby she loses much pleasure and employment as the year advances. Then again, gravel is pleasant and dry in wet weather, but it is scorching and unrefreshing in the heat of summer, so that twice in the year my opinions alter, and I recommend every lady to leave her garden as she finds it, for much may be said on both sides of this question. Where beds are placed upon gravel, or bounded by gravel walks, box edgings are by far the prettiest. They are so sweet and aromatic after rain, and so neat and green if kept properly clipped, that I prefer it to any other edging.— This is the season for planting box. Small rooted slips should be selected for this purpose, placed against the upright side of a small trench along the border, or around the bed they are intended to bound. The box should be clipped in June, in showery weather, never allowed to grow thick and bushy, because it becomes a harbor for slugs, and the roots should be kept free from weeds, dead leaves, etc. It is most refreshing to inhale the smell of this rich, pretty plant, after summer showers. As shrubs, the variegated, as well as the common kind, are very ornamental, either standing alone or, grouped in shrubberies with other trees. When forming a large round shrub, with the lower boughs resting on the ground, it is very handsome, and should stand in a grassplot or in a circle of its own.

Among the many sweet flowers that adorn our gardens, the heliotrope might be more generally cultivated; and a prettier or sweeter one a lady can scarcely possess. Its spicy odor attracts us to the border the moment we enter the garden; and when placed in single beds, the effect as well as the scent is very rich. I speak of them now, because cuttings may be taken as late as Christmas, and we cannot have too many in readiness for planting out. Place the cuttings in rich mold, three or four in each pot, according to its size, and keep them in a warm sitting room, unless the garden should possess a cu-

cumber-frame, which would do better. Pot them off into single pots when struck, and carefully remove all dead leaves and moldiness which may appear, as these greatly injure the plants. When severe weather is over in the spring, turn them into the open border, in the warmest situation you can find. If cold nights occur, shelter them with hoops and mats. After flowering, cut them down to within a few inches of the soil, which keeps them handsome; those cut down in June will bloom again in August. We cannot adorn our gardens with more delicious flowers; and ladies do not encourage them much more than they do, probably supposing them to be greenhouse plants, and therefore too tender for common use. They bloom freely and unweariedly, and are invaluable as border-plants. I have seen them in the open ground, spreading themselves around quite wildly, and throwing their spicy shoots across the walk in rich exuberance. They are too fragrant for a room. No highly-scented flowers should be permitted there, as they are injurious to health, and affect some persons painfully; but in the open air we can enjoy the strongest perfumes safely, and the heliotrope may truly be said to scent the gale.

The pale, sickly blossoms of the monthly rose are still trying to cheer our winter garden, but they are so languid, and buffeted by wind and rain, that they do not greatly add to its beauty. We are most indebted now to that lovely plant, the Christmas-rose, hardiest of the hardy too, which blooms boldly and richly at this season. This large, white, rose-like flower stands amid the evergreen leaves, vying with many summer beauties, although frosts, and snows, and rains alone greet its appearance. I wonder that this flower is not more generally cultivated, given us, as it is, to enliven the dark and stormy days of deepest winter; but it should never be admitted among winter nosegays, for the perfume is unwholesome. Among the heathen of former days these flowers were considered as a charm against evil spirits, and were scattered over their floors, with songs of praise to the dumb idols they made and worshipped. It seems a singular and beautiful providence that this flower should bloom at Christmas, as if specially sent to remind our thoughtless hearts of that deep debt of gratitude we owe to Him

who has called us out of heathen darkness into the light of the glorious Gospel; and by bringing the religious customs of savage ignorance into striking contrast with those of Christian light, to point out to us the amazing change wrought in the minds of men, from wild idolatry to pure and undefiled religion; and from the unhallowed rites of blind superstition to the reasonable service of the living God.

Woman has much in her power. Wives and mothers have great duties to perform; they are the mainspring of the moral world; and even among their fragrant flowers they may cull instruction and impart lessons of wisdom—for nature has many tongues. The holly and the Christmas-rose, belonging as they do to former times and customs, teach us to keep the great festival now passing

more in the Christian than the Pagan manner—for the idle mirth and revelry of Christmas festivity ill accord with the song that angels sung, or with the “good tidings of great joy” they brought to man. Let this brilliant flower and glossy shrub repay our care by urging us to value more deeply, and commemorate more suitably the great deliverance wrought by Him who came to “save his people from their sins;” and then we may with confidence expect a blessing upon our “basket and our store,” upon our “fields and the fruit of our ground,” and “upon all we set our hand unto.” Let woman ponder upon these things; for while sharing in the labors and pleasures of her husband and her sons, she may sow “good seed,” that shall “spring up and bring forth fruit an hundred-fold.”—*Cottage Gardener.* December, 1850.

CRITIQUE ON THE FIFTH NUMBER.

DR. WARDER: I concur with your correspondent in the opinion, that seedling peach trees are generally less affected by frost, than budded ones. But do not find this so great an evil, as to induce me to discard our valuable varieties, and raise new seedlings. Some varieties, from the experience of your correspondent, are more likely to produce the same fruit than others. Thirty years since, I saw two hundred seedling peach trees in bearing, at Dennis Kelly's, and all worthless, small peaches, which he assured me, were from the seed of a large peach of superior quality, bought by him in market to raise seedlings from. One thing is certain, there is a great difference in the bearing character of our choice budded peaches. Mr. McAvoy, and Mr. Schneicke, who have peach orchards adjoining the city, inform me, that some varieties seldom fail to bear fruit, while others adjoining, do not bear fruit one year in four, being killed by frost. Nor can I agree with your correspondent, who says, “I should not be surprised, if suitable attention be paid to the subject, that in time we rival New Jer-

sey, both in productiveness and quality.” The same kind of peach grows larger, and is of higher aroma and flavor with us, than it is East. The same is true of our apples. In Newark, New Jersey, at their horticultural exhibition, their largest peaches measured ten inches in circumference. Ours exceeded thirteen inches. One of our fruit sellers assured me, he bought some that measured fifteen inches. I shall believe this, as soon as I become a believer in all the wonders claimed for mesmerism.

Your remarks on a communication, from a Pennsylvania Farmer, in relation to the curculio, possess the rare quality of common sense. With a hard surface, plum trees near the house, and hogs for visitors, during the visits of the curculio, to frighten them away, not one crop in ten would fail. With extended brick pavements, the hogs could be dispensed with, and not lose one crop in twenty.

I would inform your sapient correspondent, F. J. S., that on my plan, no contract, verbal or written, is necessary to secure the

plums from the curculio. If I had a hundred plum trees, without a pavement or very hard surface under them, and bearing for the first time, the curculio would visit them, and deposit their eggs, certain that their young would find safe quarters for the winter. But none would think of depositing their eggs in the plums on the trees round the house, where there was an ample pavement, knowing their young would perish for want of winter quarters. We differ in our capacities. The curculio knows why a contract is not

necessary to protect trees in a pavement adjoining the house, from his depredations, though your correspondent does not.

Our friend Dr. Mosher, I perceive, believes in taming wild grapes, and improving them by cultivation for fifty or a hundred years. I hold, that a vine from the woods, fully exposed to the sun and air, and properly pruned, will, the first season, if it be a favorable one, bear as good fruit as it will after a century of taming. Yours, respectfully,

N. LONGWORTH.

FRONTISPIECE—ROOK-WOOD.

THE title of this beautiful place was unfortunately not known to the artist when the drawing was engraved. Unfortunately, because every thing should have a name, especially every place should be designated, and, having a title, it should be *presented*, upon all great occasions at least, under its appropriate cognomen.

To make the *amende honorable*, then, let us take a glance at "Rook-wood;" nor imagine, in the simplicity of our hearts, that it is at all like the ancient "Mount-Miseries" that abound in some of the antiquated sisters of our Republic—old, worn-out and barren, a fit resting place of ominous crows, in their daily migrations, such as we may have been accustomed to witness in our childhood, if spent upon the barren hills or waste sandy plains of Jersey, or Maryland, or elsewhere—No!—The crows do congregate at Rook-wood, hence the appropriateness of its title, but they do it, not on account of any attractive barrenness, but because, they are aspiring creatures, and, preferring exalted stations, they come to this high point to escape the dense morning fogs of the rivers, and to enjoy the slanting rays of the rising sun in the winter mornings. The tall trees, too, in the back-ground of unbroken forest, afford them

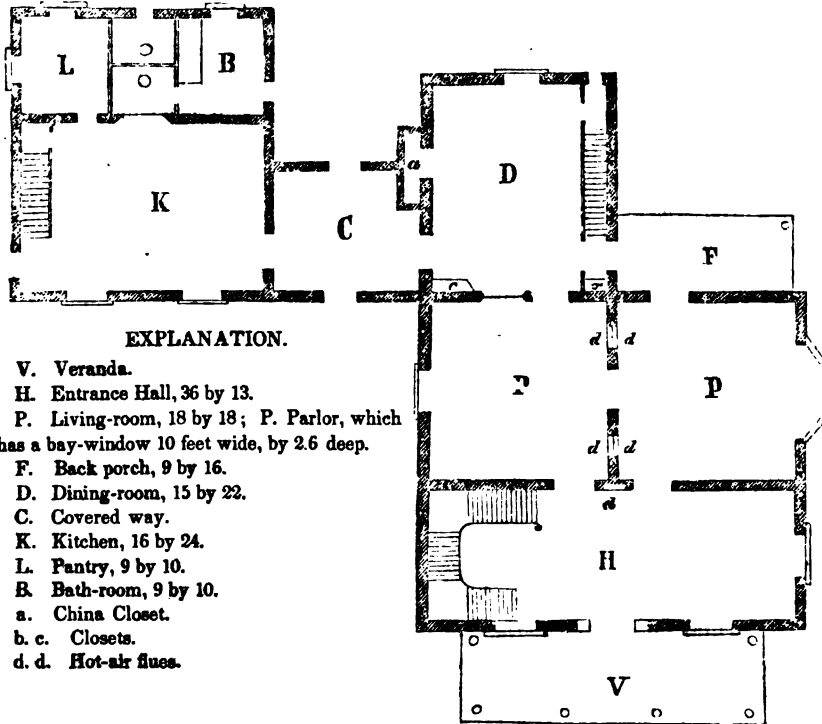
a convenient seclusion to which they can retreat from troublesome interruptions of their morning repasts; where they may in summer nurture their young, and give them the early training necessary in the education of Crows.

Be this as it may, the crows are a *feature*, and one much admired by those most interested, but for myself the place possesses so many other beauties, that the Rooks might stay away in welcome and scarce be missed, or at least be very willingly excused where we can find so much else to admire.

Mr. Joseph Longworth has selected for the site of his residence, one of those beautifully irregular ridges, which frequently jut out and stand in bold relief amid the ravines and valleys of abrasion, so commonly intersecting our rock formations, which, as geologists well know, are a peculiar blue lime-stone, that is formed of alternating layers of rock and clay, which have so yielded to the action of water as to be cut through in every direction by currents that have formed little valleys, and left ridges of the original formations. We do not or should not consider the elevated portions as hills raised up in a plain, but rather as the remnants of the plain itself, while the abraded ravines and valleys are the truly

interesting geological features of country; all this, however, may be considered rather fanciful and theoretic, by the plain matter of fact reader who will fully realize that the eminence is a *hill*, if he attempts to ascend it from our deep valleys of abrasion—espe-

cially if he be an August pedestrian. Such an one will the more fully appreciate the charms of the eminence he has reached, and, whether it be hill or abraded plain, it matters little, so that we have an opportunity of enjoying the beauties of the place.



Rook-wood is situated on the river hills, in Spencer township, about three miles east of the city, and commands beautiful views in different directions, embracing a fine inland landscape and enlivened by a glimpse of *La belle rivière*, while the horizon in many directions is formed of high ranges of hills more or less distant.

The site of the house is well chosen upon the highest point, the ground falling off in gentle slopes in every direction in an extended park, with sufficient variety of surface to please the most fastidious. Fine forest-trees remain standing in their natural beauty, form-

ing masses in different directions, and the good taste of the proprietor has directed the planting of many groups, comprising a varied collection of native and foreign trees and shrubs, deciduous and evergreen, which will make this one of the best arboretums in the country.

The house is an Italian villa, and painted a very happy tint of stone-color. This style is admirably adapted to the surrounding surface; its flat roof, with boldly-projecting eaves and handsome cornice, together with the irregularity of outline and the clustered chimneys, with ornamental tops—the brack-

eted porch on the north side, and the light aerial Chinese veranda on the South, altogether present a beautiful appearance when seen from the south-east as you approach by the carriage-way. It is a successful effort, and does great credit to the architect, H. Daniels, who was one of the first to introduce this style into our neighborhood. The plan has been well executed, under the immediate eye of the owner, who indeed superintends the planting of every tree, and directs the execution of all his plans of improvement, whether building, road-making, planting or farming. The internal arrangement combines elegance and comfort, and is delightfully calculated for the real enjoyment of rural life. The hall—36 by 13 feet, and 13 feet high—is a splendid room, occupying the whole front of the building, communicating with the parlor and living-room behind it, and containing a handsome wide stair-way at one end.

The parlor—18 by 18 feet, is lighted by a beautiful bay-window ten feet wide, and projecting 2.6 feet, so as sensibly to increase the size of the room. It affords the most lovely views across the lawn, and embraces the best of the different points of the landscape. As it projects to the east, it admits an abundance of light, the effect of which is at the same time heightened and tempered by stained glass of different hues. The bay-window is not always successful, and may be a source of great vexation and annoyance, or enjoyment and satisfaction, according to the judgment and skill with which it has been planned and executed. A common mistake is to have it too small for the fruition of its peculiar internal advantages, but those who attempt such a thing should beware of the other extreme and not make it disproportionately large, so as to appear the best and most important part of the room. This parlor opens out upon the porch, which is delightfully situated for enjoying the afternoon

shade in summer; it is 9 by 16½ feet, and the bracketed roof is supported by one only pillar of a graceful mold, giving the whole a light appearance.

The living-room—18 by 18 feet—has a window to the west, and its neat furniture, well supplied with books and other indications of literary leisure, make it a favorite room for constant use, and initiate one into the domestic habits of its excellent occupants. Besides, it communicates with that essential requisite for the creature comforts, particularly in the healthful and invigorating atmosphere of the country, the Dining-room—15 by 22—which has also an entrance from the porch on one hand, and, by a covered-way on the west, is connected with the kitchen—16 by 24—which has the rare advantage of being entirely disconnected from the main building, and at the same time perfectly accessible.

The whole house is both heated and ventilated by means of a furnace in the cellar, but the good old-fashioned open fire-place is not discarded from the Dining and Living rooms, where its cheerful home influences are duly appreciated.

The walls of the house are painted with delicate neutral tints, and the colors are warmer or cooler, according to the exposure which corresponds delightfully with our ideas of correct and refined taste. The right angles, where the walls and ceilings meet, are filled up with a graceful curve, along the center of which are vines, in some places the ivy, and in others the lotus. The center pieces are made of a simple wreath of sycamore leaves, arranged in a circle, with an open work in the center, two feet in diameter, for ventilation. The wood-work is all of black and white walnut, intermixed, highly wrought and varnished.

The garden and gas-works are north of the dwelling, as partially shown in the pic-

ture. In the former, are evidences of good judgment, in the thorough preparation to which it has been subjected; and as it has two inclinations, part sloping to the east and part to the west, the gardener may have his choice of exposure for the different plants.

There are a great many other points of excellence about this place that are well worthy

of note, but this article is already sufficiently extended, and those who are within reach and who would reap the benefit of Mr. Longworth's experience, by observing for themselves the various details which he has so successfully realized in this experiment, will, I am sure, meet with a courteous reception from the amiable proprietor.

FRUIT CULTURE IN THE SOUTH.

THESE remarks upon fruit growing in southern latitudes, are interesting, and confirm some notions previously received, but I feel constrained to observe, that I lack faith in the idea of acclimating fruits, which is so much advocated by the writer, who has even italicised the words wherever they occur. We do not succeed in this latitude in acclimating plants that are *decidedly* either tropical or alpine in their natural habitat—nor is it at all probable that any species will succeed beyond the limits of the zone for which it was originally designed. The precise boundaries of those zones have not yet been definitely settled for most plants, but we may have an approximation to it, and hence these paragraphs, taken from the "Southern Planter," possess an increased interest to us in a different latitude. Thus the delicate raspberries succeed in Mississippi, which seldom survive our winters, if unprotected.

Among our vineyards, it is difficult to realize that the Muscadine or Scuppernong can be considered "the best and most profitable" among "many kinds cultivated"—it is hardly possible that the Black Hamburg, or even the Catawba, are in the latter category. I points.—[ED. REVIEW.

should like to hear from Vicksburg, and other

The apple succeeds well with us. We have few southern seedlings of any value; but many of the finest northern and European sorts *when fully acclimated*, bear as

fine crops of delicious fruit as can be desired. True, they all ripen some weeks before their usual periods in cooler climes; but that, so far from being an objection, gives us a decided advantage over our more northern neighbors, enabling us to forestall them in market. I find that, in all cases, low training is necessary—that is, that the tree shall not have a naked stem of more than from one to three feet, according to circumstances or the fancy of the grower. The tree thus protects its own stem, and the soil in which it grows, from the sun. The English Paradise and French Doucin, used for dwarfing, I find admirably suited to our climate. The trees are low, in fact bushes; and are thrown into early bearing. Where orchards are intended, they are not suitable. But for the amateur grower of fruit for his own use, dwarf trees are best.

The pear is more easily acclimated than any other fruit, unless perhaps the peach and nectarine. It is rare that I find a sort which will not thrive well after being propagated through two or three generations, (if I may so speak) on vigorous southern-grown stocks. The difficulty consists not in the *sort*, so often, as in the *wood*, of the individual tree grown in the north, not adapting itself to our long continued heat. It does not expand in the same proportion as the young; never grows thriftily, and rarely bears fruit. The pear is our best and surest fruit. I have over two hundred varieties under cultivation, and have as fine specimens among them as I have ever seen either in the North or in Europe. The Portugal quince is used for dwarfing the pear, throwing it into early bearing, and in very many instances greatly improving the fruit. For both upland and lowland it is my favorite.

stock, for those sorts adapted to it. Some, you are aware, do not succeed at all on the quince. I have frequently had Bartlett pears to measure 12 by 16 inches, 13 by 16, and in two instances 13½ by 17 inches in circumference. The Seckel succeeds equally well; my first Seckel trees having once been bearing apple trees—filled with grafts, nine years ago. So with Bartletts and White Doyennés. The last two over-grow and die out in about eight to ten years; but in the meantime I have five or six fine crops, and they are easily re-grafted.

The peach we have, some seasons, in great perfection; but too frequently the crop is scant. So of the Nectarine. No use attempting northern-grown trees. Many thousands of dollars have been expended upon these in the southwest, all ending in disappointment.

The apricot, I feel confident will bear well, when my acclimated trees are sufficiently advanced. I wasted a number of years on imported trees. So with the plum—the European kinds. The young trees are thrifty and vigorous, and give promise of abundance of fruit. The Chickasaw plum is a favorite fruit here. I have some twenty varieties, as fine as ever eaten. They supply the place of the gooseberry most admirably.

If your correspondent will try the St. Lucie or Perfumed Cherry (*Cerasus Mahaleb*) as a stock, he will have a better prospect of success. It dwarfs the kinds worked upon it, and makes a beautiful and thrifty little tree. The wild cherry will not do. It has been thoroughly tried. Fine cherries have been grown here. My acclimated dwarfs are yet too young.

Some seasons the grape produces abundantly with us. Many kinds are cultivated, but I am inclined to think that the varieties of the Scuppernong are the best and most profitable. They prove, here, to be all that their most sanguine admirers have ever claimed for them.

Of the twenty and more sorts of fig in my orchard, the Celeste or Celestial is the general favorite; although some others are nearly equal in other respects, and much larger and firmer.

Of strawberries we have always abundance—that is, those have who try them. Many sorts are cultivated; Keen's and Hovey's

seedlings being among the best. Some southern seedlings, not yet thoroughly tested, promise at least to equal, if not surpass them.

But give me the raspberry! My Fastolffs, now that I have got them thoroughly acclimated, are superb. Next to these the Yellow Magnum Bonum, a new English sort, the New Red Monthly, the Franconia, and the Antwerp, all fine. It is a fruit easy of cultivation, continues long in season, is not injured by rains, nor cut off by spells of dry weather, like the strawberry, and is, in my opinion, a superior fruit. The raspberry loves a cool, rich and stiffish soil. Make a new bed every third year.

Of the Pomegranate, Medlar, Quince, etc., I can not now spare time to speak.

Experience has proved to us here, that to grow fruit successfully this far south, we must have southern-grown or acclimated trees, worked at or close to the ground, trained low, well fed at the surface of the ground, with appropriate manures or composts, including a good supply of lime and bones and a little salt, and surface culture, or mulching, (covering the ground around the tree with rough and decaying vegetable matter.) Root-pruning and moderate surface feeding, with manures especially suited to the tree will prevent fire-blight.

In planting fruit trees, I give them a good share of bones about their roots, mashing the bones to pieces with an ax or a hard block of wood; to be placed in the hole, when planting.

THOMAS AFFLECK.

Washington, Miss.

Inks for Zinc Labels.

Mr. Redwood, recommends this as the *Horticultural Ink*, for writing on Zinc labels:—Chloride of platinum, five drachms; distilled water, one fluid ounce, dissolved. Writing made on Zinc with this mixture almost immediately turns black, and cannot be removed by washing.

Bossin gives the following: Dissolve one part of copper in ten parts of nitric acid, and add to the solution ten parts of water.—*Jour. Pharm.*

CASTOR OIL BEANS.—We learn that 5,000 bushels of Castor Oil Beans were purchased at Shawneetown, recently, for the use of an oil factory in Cincinnati, at the rate of \$1.30 per bushel in bulk.—*St. Louis Intelligencer.*

AGRICULTURAL BUREAU.

THE following communication, coming as it does from the East, (from quiet Philadelphia,) and written by one who was deservedly placed at the head of the Pomological Congress which recently met in our city, is a most welcome confirmation of the views expressed in the 4th number. It manifests no sectional feelings, nor can it be suspected of a political bearing.

It is presented to the reader as the unsolicited expression of opinion from one whose views should carry weight with those who so anxiously look for the completion of this scheme for the melioration of the rural interests of our country.

Philadelphia, Feb. 5th, 1851.

DEAR DOCTOR—The editorial article, in the January number of your valuable "Western Horticultural Review," in reference to the Agricultural Bureau, was read by me with unfeigned pleasure; and I fully coincide with you in the opinion that Dr. John A. Kinnicott, of Illinois, "is the very man" to be placed at its head. Possessing, as he does, talents of the highest order, a vigorous intellect, a discerning and discriminating mind, a fund of agricultural knowledge, and indeed every essential qualification, I most sincerely trust he may be selected to occupy a position so important to the farming interests of the country. Though I am not a "Buckeye, Hoosier, or Western man," but a citizen of a State on the Atlantic border, yet am I prepared (knowing his entire fitness for the station) to exert any little influence I may possess, in aiding to procure an appointment every way so desirable. Without an able and efficient commissioner, an Agricultural Bureau would not be productive of those beneficial results which we all so ardently desire and anticipate. Under the superintendence, however, of such a man as Dr.

Kinnicott, the value and importance of this Bureau would fully realize the most sanguine expectations of its advocates.

In order that our country may derive every possible advantage from the proposed Bureau, it is a matter of no little moment that a competent individual should be authorized to collect agricultural information on the other side of the Atlantic, and especially in Germany. For the performance of this duty, F. L. Fleischmann, Esquire, at present the American Consul at Stutgard, in Wurtemberg, and already favorably known to the agricultural community, would be a most happy and judicious selection. Although Germany is probably the most distinguished country of the old world for science and learning, yet know we comparatively little of the agricultural attainments of its inhabitants. True, we may have all heard of the scientific researches in agricultural chemistry, of the eminent "Geissen" Professor—the world renowned Liebig. Scarcely less worthy of our careful consideration are the investigations of many of his countrymen in the same field. In some of the German States, agricultural schools, in connection with experimental farms, have been established, and are in full and successful operation. Information in regard to these, with a description of their most approved implements of husbandry, modes of tillage, domestic animals, etc., would be highly interesting and important to the American farmer.

Very truly yours,

W. D. BRINKLE'.

DR. JNO. A. WARDER.

Since the above was in type, another valued correspondent, in the neighborhood of Detroit, Michigan, has written in high commendation of the views already expressed, as will be seen in this short extract:

"I am glad to see you come out for friend Kinnicot for the Agricultural Bureau. I think a better selection could not be made, but I fear it will be conferred upon some political hack, for party purposes; we must, however, hope for the best, but the conduct of politicians all the world over gives sufficient ground for the fear."

From the Quarterly Journal of the Chemical Society.

The Relations between the Animal and Vegetable Kingdoms,

BY WHICH THE VITAL FUNCTIONS OF BOTH ARE PERMANENTLY MAINTAINED.

THIS communication will embrace the detail of an experimental investigation, which has been carried on for nearly the last twelve-month, and which appears to illustrate in a marked degree, that beautiful and wonderful provision which we see every where displayed throughout the animal and vegetable kingdoms, whereby their continued existence and stability are so admirably sustained, and by which they are made mutually to subserve, each for the other's nutriment, and even for their indispensable wants and vital existence. The experiment has reference to the healthy life of fish preserved in a limited and confined portion of water. It was commenced in May, 1849, and the subjects chosen were two small gold fish. These were placed in a large glass receiver of about twelve gallons capacity, having a cover of thin muslin stretched over its mouth, so as to exclude, as much as possible, the sooty dust of the London atmosphere, without at the same time impeding the free passage of the atmospheric air. This receiver was about half filled with ordinary spring water, and supplied at the bottom with sand and mud, together with loose stones of larger size, of limestone tufa from the neighborhood of Matlock, and of sandstone; these were arranged so that the fish could get below them, if they wished so to do.

At the same time that the fish were placed in this miniature pond, if I may so term it, a small plant, of the *Vallisneria spiralis*, was introduced, its roots being inserted in the mud and sand, and covered by one of the loose stones, so as to retain the plant in its position. The *Vallisneria spiralis* is one of those delicate aquatic plants, generally selected by the microscopist for the exhibition of the circulation of sap in plants. It throws out an abundance of long, wiry, strap-like leaves, of about one-fourth of an inch in breadth, and from one to three feet in length.

These leaves, when the sun shines upon them, evolve a continued stream of oxygen gas, which rises in a current of minute bubbles, particularly from any part of the leaf which may have received an injury.

The materials being thus arranged, all appeared to go on well for a short time, until circumstances occurred which indicated that another and very material agent was required to perfect the adjustment, and which, from my not having thought of at the time of commencing the experiment, had not been provided against. The circumstance I alluded to, arose from the internal decay of the leaves of the *Vallisneria*, which became yellow from having lost their vitality, and began to decompose; this, by accumulation, rendered the water turbid, and caused a growth of mucus, or green, slimy matter on the surface of the water, and on the sides of the receiver. If this had been allowed to increase, I conceive that the healthy life of the fish must have suffered, and probably their vital functions have been destroyed. The removal of the decaying leaves from the water, therefore, became a point of paramount importance to the success of the experiment. To effect this, I had recourse to a very useful little scavenger, whose beneficial functions have been too much overlooked in the economy of animal life.

I mean the water snail, whose natural food is the very green, slimy growth, or mucus and decaying vegetable matter, which threatened to destroy the object which was wished to be obtained. Five or six of these creatures—the *Lymnæa stagnalis*—were consequently introduced, and, by their continued and rapid locomotion and extraordinary voracity, soon removed the cause of interference, and restored the whole to a healthy state, thus perfecting the balance between the animal and vegetable inhabitants, and ena-

bling them both to perform their vital functions with health and energy.

So luxuriant was the growth of the *Vallisneria*, under these circumstances, that by the autumn, the one solitary plant that had been originally introduced, had thrown out myriads of off-shoots and suckers, thus multiplying to the extent of thirty-five strong plants; and these threw up their long, spiral, flowering stems in all directions, so that, at one time, more than forty blossoms were counted lying on the surface of the water.

The fish have been lively, bright in color, and appeared very healthy, and the snails also, judging from the enormous quantity of gelatinous masses of eggs, which they had deposited on all parts of the receiver, as well as on the fragments of stone—appear to thrive wonderfully, and, beside their functions in sustaining the perfect adjustment of the series, afford a large quantity of food to the fish, in the form of the young snails, which are devoured as soon as they exhibit signs of vitality and locomotion, and before their shell has become hardened.

Thus we have an admirable balance, sustained between the animal and vegetable kingdoms, and this, in a liquid element. The fish, in its respiration, consumes the oxygen held in solution by the water as atmospheric air, furnishes carbonic acid, feeds on the insects and the young snails, and excretes material well adapted as a rich food to the plant, and well fitted for its luxuriant growth.

The plant, by its respiration, consumes the carbonic acid produced by the fish, appropriating the carbon to the construction of its tissues and fiber, and liberates the oxygen in its gaseous state, to sustain the healthy functions of the animal life, at the same time that it feeds on the rejected matter, which has fulfilled its purposes in the nourishment of the fish and snail, and preserves the water constantly in a clear and healthy condition, while the slimy snail, finding its proper nutriment in the decomposing vegetable matter and minute confervoid growth, prevents their accumulation, by removing them from the field, and by its vital powers, converts what would otherwise act as poison, into a rich and fruitful nutriment, again to constitute a pabulum for the vegetable growth, while it also acts the important part of a purveyor to its finny neighbors.

Management of Soil.

A SOIL would never get exhausted, if managed with skill, but would continue to improve in depth and fertility in proportion to the industry bestowed upon it. The food of plants, it is true, may be exhausted from the soil by a repetition of cropping with any one family of plants, if we neglect the application of such fertilizers as may have been taken from the soil by that family; but no part of the growing season is required for the soil to rest, or lie fallow, if judiciously managed by a successive varying of the crops, or by supplying to them such food as may be a compensation for what has been taken off by the previous crop. The first object to be attained for securing a certain and profitable return of produce from the soil must be *thorough drainage*; the next object is, *breaking into the subsoil* to the desired depth—not without first considering whether it is proper and profitable to shift or turn up the subsoil at once to the influence of the atmosphere, or whether it is best to break into it well first, by shifting the surface soil, and allowing the subsoil to remain and receive—first the beneficial influence of the atmosphere, and then—at the trenching, a portion of the subsoil may be safely stirred up and mixed with the surface soil; this practice continued for every succeeding crop, will establish a healthy fertilizing surface soil to any desired depth.

If repeated stirrings of the surface are adopted, according to the nature of the soil and weather, every growing crop will continue in healthy luxuriance, without ever suffering by receiving injury from too much moisture, drought, or frost. In addition, by constantly scarifying, hoeing, and forking the surface soil, not only obnoxious insects and their larvæ are expelled, but weeds would never make their appearance, much less have a chance of committing their accustomed robbery of the soil and crops. Besides, by such repeated stirring, the soil is always prepared, sweet and healthy, for succeeding crops—no mean consideration, either when we observe the loss of time and produce occurring to such a ruinous extent in some localities, by allowing weeds to rob and choke the growing crops, and to shed their seeds, productive of a progeny similarly injurious to the crops next in rotation.

The application of manures is most essen-

tial, and may be applied most beneficially when the soil is established in a healthy condition, and maintained thus by a constant attention to surface-stirring. Yet the application of manure is a secondary consideration; for though it may be very liberally applied, and with considerable expense, yet, without first insuring the healthiness of the soil, much property and labor will be sacrificed.—*Cottage Gardener.*

CINCINNATI HORTICULTURAL SOCIETY.

THE weekly meetings have been kept up with great spirit this winter, ever since the annual meeting and election, noticed in the preceding number of the Review.

The exhibitions have been very interesting, though not so extensive as in summer and autumn. We have seen a greater or less display of fruits, however, every Saturday, and among them, all the best standard varieties. Specimens of the Newtown Pippin, Rawle's Janet, Pryor's red, Baldwins, Spitzenburghs, and many other kinds were such as would captivate any pomologist. Among the novelties, the Northern Spy from Rochester, presented by H. P. Byram of Louisville, were beautiful, and possessed the high aroma for which they are remarkable, but our Committee did not rate them so high for flavor as some of the old established kinds.

The chief contributors of fruit, during the winter, were M. S. Wade, Gabriel Sleath, A. Worthington, T. V. Peticolas, Wm. Orange, R. G. Buckner, A. H. Ernst, M. McWilliams, R. Buchanan, I. C. Ferris, Dr. Whipple, Jno. E. Mottier, F. B. Williams, H. N. Gillett, M. Kelly, S. M. Carter, Jos. Clark, Mrs. Saunders, Dr. W. T. S. Cornett, and several kind friends in the markets.

Specimens of wine of the last and previous vintages have attracted much attention, and caused many interesting discussions. The sweet wines, exhibited by N. Longworth as ladies' wines, are a new article, and elicited a report from the Wine Committee.

Flowers have enlivened the tables from time to time—beautiful baskets of cut flowers in great variety from Messrs. Heaver, Jackson and others. Among many other pretty things, Mr. Jackson exhibited *Habrothamnus corymbosa*, *Begonia fuchsoides* and others, *Abutilon venosum* and *striatum*, *Heliotropium peruvianum* and *Souvenir de Liege*, *Gesneria zebrina* and *obovata*, *Manettia bicolor*, *Euphorbia*, *Jacquinæflora*, *Tropæolum*, *Lobbianum*, *Bletia*, *Tankervillea*,

Azaleas, (among which was a new seedling variety named *Warderia*) *Lantanas*, *Verbenas*, *Roses*, etc.

W. Heaver presented, among others, *Euphorbias*, *Abutilons*, *Loasa*, *Coronilla glauca*, *Polygala cordata*, *Chorozema varium*, *Lachenalia tricolor*, *Budleya madagascarensis*, *Hibiscus sinensis*, *Heliotropes*, *Azaleas* in beautiful variety, *Eupatoriums*, *Nemophilas* in variety, *Kennedia racemosa*, *Lantanas*, *Eccheveria pulverulenta*, *Jasminum Sambac multiflora*, *Pansies* and *Roses*.

John McFadden—*Cinerarias*, *Callas*, *Abutilon*, *Euphorbia Jacquinæflora*, *Jasminum revolutum*, *Verbenas*, *Hyacinths*, *Heliotropes*, *Scarlet geraniums*, *Orange flowers*, &c.

Pot plants were shown by Anthony Eckart, *Camellias* and *Primulas*; by Geo. Watson, a fine display of *Hyacinths*, seven varieties grown in pits without fire-heat.

Camellias were displayed on the 1st of February, being the day fixed in the schedule. The premium was awarded to Geo. Swanson for the best six. The severity of the weather prevented so large a competition as had been anticipated.

Charles Beck and Joseph Töpfer exhibited a number of *Evergreens* in pots, many of which are new here.

Vegetables have not made much display during the winter. The premium for salad was awarded to Geo. Watson on the 1st of February.

The following persons have been elected to membership since the first of the year:

Jno. Shillito, Wm. Woods, Chas. Beck, Joseph Töpfer, N. P. Steward, Samuel Murphy, Jas. M. Lea, Thos. Palmer, Geo. Watson, Michael Farrell, Chas. W. Dimmock, H. F. Sedam, H. H. Southgate, Wm. Stoms and Otho Ott.

At the monthly meeting on the 1st of February, the President directed the attention of the Society to the necessity of having a HORTICULTURAL HALL, which should be

commensurate with our growing wants. The proposition was immediately referred to the council, who have paid much attention to the subject, have examined several lots of ground in different situations, reported progress from time to time, and are still engaged in the enterprise in connection with the merchants of the city, who contemplate erecting an Exchange, and it is now proposed to build a handsome edifice for our joint accommodation. It is earnestly hoped that something may be accomplished by our united efforts, which will be creditable alike to both merchants and horticulturists, and which will be an ornament to the city.

American Wine Growers Association of Cincinnati.

At a meeting of the Horticultural Society held on Saturday the 25th of January, it was suggested, that those interested in the cultivation of wine should organize themselves into an association for mutual improvement and protection, upon the plan of the celebrated German, *Wein Bau Verbesserung Gesellschaft*, (Wine Farmers' Improvement Society.) Robt. Buchanan, who made the proposition, requested all so interested, to convene at his house; some preliminary meetings were held. On the 1st February the Association organized by the election of Stephen Mosher chairman, and adopted the following regulations reported by a committee:

1. This Society shall be called the American Wine Growers' Association of Cincinnati, Ohio.

2. The design of the Society shall be to promote the cultivation of the grape, the preparation of wine in its greatest purity, and the encouragement of such efforts for improvement in the art, as may be found best adapted for the purpose.

3. The officers shall consist of a President, Vice President, Secretary and Treasurer.

4. Its members shall be composed of wine-growers, and others interested in the advancement of the objects of the Association.

5. All elections for membership shall be by ballot; two-thirds of the votes of the members present shall elect the applicant.

6. The officers of the Society shall be elected by ballot, on the first Saturday of

January—shall hold their office for the term of one year, and until their successors are elected; a majority of the votes cast by the members present, shall be necessary to a choice.

7. A quorum for the transaction of business shall consist of not less than five members, and for the election of officers, not less than ten members.

8. The regular meetings of the Association shall be held on the first Saturday in each month, at such hour and place as shall have been agreed upon at the previous meeting. Special meetings may be called by the President, or, in his absence, by any three members, by giving three days notice in one or more of the daily newspapers of the city.

9. Each person, on becoming a member of this Society, shall pay an initiation fee of one dollar, and an annual subscription of one dollar.

10. No person shall be permitted to resign his membership until his dues are settled.

11. All payments of money shall require a resolution of the Society, and a draft by the Secretary on the Treasurer, which must be countersigned by the President, or, in his absence, from the city, by the Vice President.

12. The President shall be a member of all committees appointed by the Society.

13. One of the principal objects of this association shall be the encouragement of the making of native wine in its greatest purity, and of the cultivation of the grape, by awarding premiums to meritorious articles.

14. The regulations to control the awarding of premiums, shall be prepared and approved of by the Society.

15. These Rules may be altered or amended at any regular meeting by a two-thirds vote.

The Society are engaged in taking the specific gravity of wines, and noting their properties and qualities. On the 15th of February the following officers were elected:

President,	S. MOSHER,
Vice President,	L. REHVUSS,
Treasurer,	T. H. YEATMAN,
Secretary,	JNO. A. WARDER.

The Society met again on the 22d and continued their discussions with spirit and unanimity, and hope to improve the processes of wine making by frequent conferences.

TREES, SHRUBS, AND ORNAMENTAL PLANTING.

UNTIL within a very recent period, the cultivation of trees for mere ornament, occupied very little attention in America. The luxuriant forests which every where covered the country, presented so great an impediment to farming operations, it was not unnatural that the early settlers should have regarded trees as enemies—which it was their duty to destroy—or at best look upon as only valuable for building, fencing, fuel, and such purposes. The majestic oak, the stately tulip tree, the beech, or the hickory, had little charms for the man whose ideal of a landscape did not expand beyond trim orchards of fruit trees, or square fields of corn, and therefore the forests went down before the ax—and we have now to plant trees where those who preceded us waged a war of extermination against them.

Good taste, it is true, may have spared a rare or beautiful tree, even in a corn field; pastures have been partially cleared in some places, and trees suffered to remain to give a picturesque appearance to the face of the country; but still, it is necessary to plant now. Not only is it requisite to give variety by the introduction of species not indigenous to the locality, but it is also necessary to produce younger and more healthy plants of the species originally found in this country.

The trees for planting should always be nursery-grown. A young tree growing in a wild state, generally sends its roots far from its stem in search of nourishment, or rather because the root will prolong itself if it is not prevented by artificial means from so doing. In any attempt to transplant such a tree, its best roots, and all the young fibers attached to them, are unavoidably cut off; because they have traveled so far from the stem that it is not possible to dig them out entire. Such a tree, if it grow at all, will be feeble

for years, and can never equal the vigorous young tree taken from a nursery, which has been root-pruned, by successive transplantings, until its roots have formed a sort of mop around the stem, and can be easily taken up entire. Again: young trees, in a wild state, usually grow under the shade of larger trees, and are often found unable, on that account, to bear an open situation—while the tree from the nursery, always accustomed to that exposure, suffers nothing from it.

Deciduous trees generally bear transplanting from the woods better than evergreens. Thousands of young pines, spruces, and other trees of the same family, are annually sold in our markets, fresh from the woods. In most instances, not one in a hundred of those unfortunates survives the ensuing summer; we know of instances where not one in a thousand has lived.

The ground intended for ornamental as well as fruit trees, should be prepared for planting by being dug to the depth of a foot, if possible, or plowed and sub-soiled. It should also be drained if necessary; and, when much impoverished, it should be manured—either by the addition of good soil, decomposed leaves, or other suitable materials. Some families of plants require soils of peculiar natures; but by far the larger proportion will thrive very well in any good soil.

In planting new and rare trees, it should be remembered that in many instances, the methods pursued in nurseries to propagate them, and accelerate their growth, have a tendency to render the plants for sometime afterward, unable to withstand the rigor of our climate; and it should also be remembered, that many species, not generally considered hardy, will grow sufficiently well here, if they are placed in a suitable soil and situation.

In order to give a fair trial to any tree *supposed* to be delicate, it will be necessary to give it a soil not too retentive of moisture. A dry soil is warmer than a moist one. It is a non-conductor, and, therefore, retains its heat. It is, also, because it is dry, not liable to lose as much heat by the evaporation of moisture. Care should be taken, therefore, in the cases where really tender plants are to be preserved, to give some artificial protection in the winter to the soil around their roots, to prevent its becoming *wet*, and it is not too much to say that the soil can not be too dry, unless the roots shrivel in it. Another condition equally essential to the top of a tender plant, is protection from the *Sun* in winter. It is not sufficiently known that mere freezing is rarely the destructive agent. It is the sudden thawing of the frozen plant which really effects its destruction; care should be taken, therefore, to give all plants liable to injury from such a cause, a proper protection from the sun, for the first few years at least—by planting them on the north side of some tall evergreen, or some building—or by giving artificial shelter in any other manner that may be most convenient. Both theory and experience, would naturally suggest a dry bank, near the summit and on the northern slope of a hill, or other rising ground, as the most proper situation for plants which are nearly hardy; there the soil would not be saturated by rains and snows, and there the rays of the sun could not have much force in the winter. This is what is meant by acclimation; it is merely giving plants that require no more heat than the mean annual temperature of our climate, a sufficient protection against its extremes. All plants which require a higher average temperature than ours, can never be grown in the open air here, and all efforts to do so are nonsensical.

In protecting the tops of young trees, it is necessary that the material used shall be of

such a nature as to allow the air to pass freely through it—otherwise damp will accumulate, especially on evergreens—and more injury will result than if no protection had been used.

The planter should ascertain, if possible, the average annual growth, the habit, and general outline of every tree or shrub he intends to set out; also, the aspect, soil, amount of moisture, and degree of exposure best suited to each species. A knowledge of these circumstances may enable him to avoid the commission of errors similar to those so common in Spring Grove Cemetery, and other places in our neighborhood. Ignorance alone can excuse the perpetration of such stupid blundering. Who, with common sense, and any amount of knowledge of trees, would plant a white pine in a situation which would not afford room for the expansion of a juniper?—or, who would plant spruces, and other evergreens of the densest character, under the shade of which no grass can grow, within two feet of the edge of a gravelled walk? which, every body knows, can never present a beautiful appearance, unless its margin is preserved uniform.

By judicious planting, scenery of extremely varied character, and great beauty, may be produced on any piece of ground. There are very few generally admitted rules which can be given to govern matters of taste in landscape gardening. The only one we believe to be of paramount importance is to make use of *common sense*. There are many individuals in the country who profess to be "Landscape Gardeners," and every gentleman who has a cemetery lot, or a country place, feels fully competent to direct its arrangement: we wish they would all conform to this plain rule.

We regret to say, that common sense, the truest guide in landscape gardening, as well as in every thing else, is not often evident in

the works of our "Landscape Gardeners;" their stock in trade consists of stale maxima, unbounded self-conceit, and the capacity to perform imitations servile and unmeaning, of designs they have seen or read about, which, in most instances, are altogether unsuitable for any other locality than the original sites for which they were intended—if even for those. Did the mischief committed by those luminaries only extend to the "improvement" of a few gentlemen's private residences, it might not claim our notice, but when large public grounds are ruined in carrying out their views—at an enormous expense too—it is time the public should pay some attention to the subject. We have seen cow paths and wagon tracks, superior in design to many of the avenues laid out by landscape gardeners, because they are of easier grade, and free from any unnatural amount of curving. Trees should be planted as much with the view of affording a desirable amount of shade and shelter, as for ornament alone. Of course both objects may, and should be blended; but convenience should always be the primary consideration, and never entirely sacrificed to gratify the landscape gardener. The writings of Repton, Downing, and some few others, have done much to foster real taste, and may be read with profit by all who desire to improve a *natural* talent for laying out ornamental grounds.

We propose to notice in this and succeeding papers, some of the Trees and Shrubs, native and exotic, most desirable for ornamental planting, confining our remarks to those considerations which it is presumed may be of importance to readers in general, avoiding, as much as possible, all technical terms, and minute botanical descriptions, and also disregarding all classification; since we live in a country which, although prolific of trees to grace the warmer seasons of the year, has little to relieve the dreary as-

pect of winter, we therefore commence with the Evergreen.

ARAUCARIA, imbricata; the Chili Pine. This tree is a native of South America, and is, certainly, when large, one of the grandest objects in nature. In its native mountains it grows to the height of one hundred and fifty feet, with a rigid perpendicular stem, and wide-spreading branches, disposed with remarkable regularity. Its leaves, unlike those of most other conifers, are broad and lance-shaped. They are stiff and thickset, in spirals on the young shoots, are of a very dark color, and remain green on the branches and stem for many years. Some rather large trees of this species are to be found at several places in England; the climate there seems to suit them very well. It has grown well in most situations where it has been planted in the United States; but as the young plants generally have been raised under glass, and are, therefore, tender, it is best to afford it some slight protection for the first two or three winters. As it prefers a light soil, it should never be planted in moist or heavy ones, unless on artificial hillocks, or where the ground has been well drained.

ABIES communis, or excelsa; the Norway Spruce is a native of the coldest parts of Europe. Extremely rapid in its growth, and of the hardiest constitution, it there arrives at gigantic dimensions, being sometimes more than one hundred and fifty feet in height, always growing perfectly straight and upright, with horizontal branches, which, in open exposures, rarely decay. It is not uncommon, in Europe, to see very large trees of this species furnished with branches to the ground, and presenting a cone of dark green foliage seventy or eighty feet high. In this country, wherever tried, it has proved entirely hardy. It bears transplanting very well, and is, in all respects, one of our finest evergreens. Its bark, on the young wood, is

nearly white. The leaves, four-sided and thickly set all round the young shoots, always stand singly, and without sheaths at their bases. Fine specimens, twelve or fifteen feet high, may be seen at the residence of Robt. Buchanan, in Clifton.

All Firs and Spruces have their leaves single and naked at the base—all Pines have two or more leaves enclosed in a sort of sheath at the base, the number generally being constant in any species; thus the White Pine always has its leaves in bunches of five, the *P. rigida* in bunches of three, and the *P. austriaca* in bunches of two. These are the most obvious distinctions, as the cones are not often to be seen, especially on young trees.

ABIES nigra; the black Spruce. This fine tree is little, if at all, inferior to the Norway Spruce. It grows rapidly, and is said to attain, in its native localities, the height of seventy feet and upward. Its leaves of the darkest green, four-sided, solitary, and rigid, contrast strongly with the deep red color of the bark on its young shoots, which are much stouter, and more erect, than in the Norway Spruce. Its leaves are also longer, and of greatly darker color. A handsome tree of *Abies nigra*, twelve feet high, and growing well, is to be seen at J. Hoffner's, at Cumminsville.

ABIES rubra; the red Spruce, so called from the color of its bark, which, however, is not so red as that of *Abies nigra*. Its leaves are also much shorter, more flat, and of a lighter color, than those of that variety. In its manner of growth, it strongly resembles the Norway Spruce, with which it is often confounded in the nurseries, but from which it can be easily distinguished by its red colored bark, and shorter leaves. *Abies rubra* is one of our handsomest evergreen trees. It will grow sixty or seventy feet high, and flourish in any good soil. There

is a fine young tree of this variety fifteen feet high, at J. Hoffner's.

ABIES alba; the white Spruce. This elegant tree does not grow as rapidly, nor as large, as either *Abies rubra* or *Abies nigra*. Its branches are slender, but compact, with light red bark, and short, silvery, four-sided leaves crowded on the young shoots. It grows to the height of fifty or sixty feet, and like most of the spruces, it is easily transplanted, and will grow in good soil. Like them, too, its form is conical. Specimens of *Abies alba* are to be found at J. Hoffner's, and other places around Cincinnati.

ABIES canadensis; the Hemlock Spruce, is the Weeping Willow of evergreens. Its drooping branches, slender and elegant, give it an aspect peculiarly its own, and remarkably distinct from that rigid formality so characteristic of the Pine family. It grows to the height of sixty or seventy feet, transplants well, (when nursery grown,) and will bear trimming as well as any tree, when used as a hedge or screen. It can be grown under the shade of other trees, and it is extremely hardy. Very pretty specimens can be seen at R. B. Bowler's.

PICEA pectinata; the Silver Fir, becomes in Europe a noble tree, and, when well established, promises to grow equally well here. Its leaves, about an inch long, are flat, and arranged in two rows on opposite sides of the young shoot, having a streak of silvery whiteness on each side of the midrib, on the under surface of the leaf. It very much resembles the American Balsam Fir, but its leaves are longer, more flat, and more horizontal. It also grows to be a far larger tree. The Silver Fir grows but slowly when young; but, like many other tall growing trees, its vigor afterward makes amends for its tardy growth in early age. It is perfectly hardy, and a highly ornamental tree. It requires care in transplanting.

PICEA balsamea; the Balm of Gilead, or Balsam Fir, is, when young, a rapid grower, and a very beautiful tree. As it advances in age, however, it generally loses its lower branches, and it never arrives at the same size as the Silver Fir, which is its superior in every respect. The great beauty and rapid growth of the Balsam Fir, while young, will always make it a favorite with those who do not plant for posterity, especially as it is more easily procured and cheaper than the Silver Fir. It requires care in transplanting.

PINUS strobus; the White Pine, Weymouth Pine, or Silver Pine, (as some people call it.) This, the most stately and beautiful of the American Pines, is one of our most ornamental evergreens, contrasting well with Spruces and other dark colored evergreens, as well as with deciduous trees. It bears transplanting better than most evergreens. It loves a rich soil, is a very rapid grower, often making shoots of three feet in length, and more, in a single season, and when fully grown, it frequently reaches the height of one hundred and fifty feet. Its habit of growth is conical, its bark is smooth, and, on the young wood, green. Its leaves, four to six inches long, are slender and elegant, of a blue green color, and always in bunches of five. Fine specimens sixty or seventy feet high may be seen at Mr. Hurd's residence, east of Walnut Hills, and at many other places in our neighborhood.

PINUS rigida; the Pitch Pine, Yellow Pine, etc., although inferior in size and beauty to *Strobus*, is, still, very worthy of cultivation. When grown in a favorable situation, it is almost as handsome a tree as *P. austriaca*, now so deservedly popular here and in Europe. *P. rigida* has a rough, reddish bark. Its leaves are in threes, are three or four inches long, upright, and of a yellowish green color. This tree forms an irregular and somewhat rounded head, and often loses its

lower branches as it grows large. It grows to the height of sixty or seventy feet. Some pretty trees of this species may be seen at Mr. Jackson's Nursery, and a fine plant fifteen feet high, is thriving at W. Irwin's place, near Locust Grove, where it has been sheltered by the shade of a large apple tree, which must now be removed to give it room to extend its branches.

PINUS variabilis; the Yellow Pine, in its general appearance and the color of its wood and leaves, bears some resemblance to *P. rigida*. It is, however, a much smaller tree, seldom growing to more than forty or fifty feet in height. Its leaves are two or three inches long, slightly reflexed, partly in twos and threes—a peculiarity of this Pine. Its growth is irregular; but it may be made a handsome tree by pruning, as it will form buds on almost any part of the shoots, differing in that respect from most other Pines and Spruces, which usually form them in clusters on the tops of the young shoots. It will grow in any poor soil; but large plants can not be safely lifted unless they have been frequently removed in previous years.

PINUS inops; the Scrubby Pine, or Jersey Pine, is a distorted, straggling tree, seldom forty feet high, with yellowish leaves, about two inches long, and arranged in pairs. It is unworthy of general cultivation, at least for ornament. A specimen ten feet high may be seen on Mr. Hoffner's grounds.

PINUS sylvestris; the Scotch Fir. This Pine is extensively diffused through all the mountain ranges in the north of Europe. It is extremely hardy; in whatever soil or situation it has been planted in this country, it has proved as sturdy as any of our native Pines. It grows vigorously, and when at maturity, is a fine, lofty tree, seventy or eighty feet high, and generally with a very straight stem. Its leaves are in pairs, slightly reflexed, three or four inches long, and of a

bright green color. The bark on the young shoots, as well as the stem, is generally of a cinnamon red color.

PINUS ausiriaca; the black Austrian Pine, is a native of Europe. Its leaves are in pairs four to six inches long, straight, upright, and of a dark green color. It is a rapid grower, close headed and symmetrical, and one of our

very finest ornamental evergreens. It is also quite hardy. A handsome specimen twelve feet high and eight feet in spread of branches, is growing at Cumminsville, on Hoffner's place. Smaller ones may be seen at Mount Storm, the residence of R. P. Bowler.

M. KELLY.

(TO BE CONTINUED.)

NOTICES OF PUBLICATIONS.

A PRACTICAL TREATISE on the Construction, Heating and Ventilation of Hot-Houses, etc., etc.—by Rob't. B. Leuchars. W. H. Moore & Co., Main street, Cincinnati.

This valuable work should have received a more extended notice in this Number of the Review, but has been necessarily postponed.

ESSAYS on the Cultivation of the Tea Plant in the United States—by Junius Smith, LL. D.

Our kind friend, H. P. BYRAM, of the Louisville Journal, has been so kind as to send this pamphlet, for which I have been looking with great interest. It is a subject of importance, and shall be analytically presented to the readers of the periodical.

☞ The HORTICULTURIST, by A. J. Downing, has reached the Editor's table, with a cheering salutation to his young kinsman, for which he feels much indebted, and hopes one day to enjoy an opportunity of extending the acquaintance in a more personal manner.—The February number is, as usual, full of interesting and valuable matter. Will not the Publisher have the kindness to put it up in the general package for this Post Office?—this number was much injured by wet on its transit. Does Mr. Downing receive my exchange addressed to Albany?

☞ The ALBANY CULTIVATOR for February, makes a good appearance, as it always does. The Chemical papers of the State Chemist, J. H. Salisbury, are valuable contributions to this excellent Periodical.

MAGAZINE OF HORTICULTURE: C. M. Hovey, Boston. No. CXCIV—February, 1851.

This monthly, from its number quoted above, is truly of the ancient régime—quite an antiquity, and a very encouraging prospect for a new beginner, is the possibility of so extended an existence in the editorial ca-

reer, from which croakers would persuade a beginner that starvation must drive any aspirant in less than a year. Do not believe any such alarmists, while the mystic numbers CXCIV are before you! Perseverance is a capital lesson, for which I shall thank you, Mr. Hovey.

Allow me to remind you, however, that the very interesting number before me is accidentally here, as you mailed a duplicate to our Horticultural Society. Be so kind as to place me on your Exchange list, and send me the back numbers of the current volume.

NEW ENGLAND FARMER, Boston.

This excellent Agricultural paper reaches my table regularly, and is always welcome. It contains much valuable information upon Horticulture and Pomology, which is of great interest, and the opinions of Mr. Cole are worth having.

PRAIRIE FARMER, Chicago. February, 1851.

This cheerful voice from the Western plains is always marked by something racy. The Osage Orange and Hedge question, in general, appears to be exciting some discussion in that region. Having given the readers of the Review the arguments in favor of Hedging, and believing that hedges are able to defend themselves, the spicy article yclept *BOIS D'ARCH-I-ANA*, is reproduced without fear.

It is pleasant to see that the "Review" can occasionally furnish an acceptable article for the northern region.

OHIO AGRICULTURIST—Monthly; \$1 per year: Tiffin, Seneca co., O., by Dr. Sprague.

If Ohio were once filled with farmers who were ignorant, because they could not reach books and science, they can no longer have any excuse—Professors and learned Doctors having come to the rescue, and nobly devoted

their time, labor, knowledge and talents, to enlighten the sons of the soil, and that too at the cheapest possible rates.

Here is another laborer entering the fertile field—the third periodical devoted exclusively to the agricultural interests of our glorious agricultural State, and it is to be hoped that the farmers will only appreciate the efforts that are making in their behalf.

Dr. SPRAGUE leads off in fine style—his work is highly creditable to the fertile county whence it emanates, and will be gladly received as an exchange for our mutual benefit.

HORTICULTURAL ADVERTISER. E. C. Frost, Catharine, Chemung co. (N. York) annual—folio.

This namesake quite startled the Editor of the Western Horticultural Advertiser by making its appearance in the field as an opponent and namesake. But a closer inspection shows him to be a shrewd nurseryman, who

is so large an advertiser as to require a folio for himself.

Allow the suggestion to be made, with all diffidence, that a page of the Western Horticultural Advertiser would be a capital place for his card—and could be well distributed for him among the very readers who should be reached by his offers of nursery stock. Consider the proposition, Brother Frost, and others, *Nurserymen and Gardeners, East, North, West and South*—for THE WESTERN HORTICULTURAL ADVERTISER is blown by every wind—its 16,000 leaves may reach every county in the government.

VALLEY FARMER, St. Louis, Mo.

Welcome, my western friends—continue to reciprocate favors—we have our several fields to till—and may be of mutual advantage to each other.

NATIVE GRAPES—FOR THE TABLE AND FOR WINE.

THE season is approaching when I shall be desirous of obtaining cuttings of all new native grapes of fine quality. The Fox and Winter grape, Scuppernong of North Carolina, and Muscadine of the Mississippi, are not desirable; nor any vine that is not a good bearer. I last spring grafted fifty three, and the spring before twenty-four varieties of native grapes, and had many of them to bear fruit the first season. Four of them promised to be of good quality. One from Arkansas cannot be distinguished from the Catawba. I shall be greatly obliged to any person knowing of any new fine grapes, to drop me a line, and send me some cuttings. The cuttings to be of the wood of last year. The expense of transportation will be no object, as a variety may be sent me worth millions of dollars to the United States. The cuttings will keep best packed in green moss. Where no other method of conveyance can be had, if the grape is of superior quality, a few grafts may be sent me by mail, between four damp newspapers, and a very small quantity of fine green moss might be put at the lower end of the grafts. Cut them three-fourths of an inch above an eye, and three inches below it. I will engage to have fruit from them next fall. In ninety-nine cases in one hundred, the Fox grape can be of no value. The

bunches are small, pulp hard, skin thick, and the berries drop from the vine as fast as they ripen. To this rule there are a few exceptions; and the grape, free from these defects, and of fair quality for table use, may be valuable to give aroma and flavor to grapes deficient in these requisites.

We are indebted to Major Adlum for the introduction of the Catawba grape. For the table it is of fine quality, and for wine has no superior in Europe. This grape will be worth millions of dollars to the United States, and I doubt not that grapes of equal value are yet to be found. But we have much yet to learn in the manufacture of wine. Should a valuable grape be sent, precisely of the same character, by a dozen persons, my obligations will not be lessened. Any grape equal to the Catawba, or Isabella, as a table grape, is desirable. I am now trenching and benching twenty acres on which to plant new varieties, and raise seedlings from our best native grapes.

If the wild hills of California be as rich in grapes as in gold dust, Jerseyman though I am, I shall be more gratified to receive a grape cutting, than the largest lump of gold that region has ever produced.

N. LONGWORTH.

Cin. Com., Feb. 5.

NATURAL HISTORY OF THE CURCULIO.

SOME of the readers of this periodical may possibly consider that too much space is devoted to the subject in hand. All who appreciate delicious fruit will unite with the Editor in desiring knowledge respecting the habits of this insect, if we can obtain it.

This we have offered to us by a most acute observer, one of the best entomologists in the country, one to whom the farmers of the United States already owe a debt of gratitude for her published observations respecting destructive insects.

To this is appended a letter from a St. Louis subscriber, which contains some excellent suggestions, though the Editor will not indorse all his theories, some of them having already been disproved in these pages.

Germantown, Pa., February, 1851.

I send to you, my kind friend, a brief history of the plum Curculio as I have known it for years, and can answer for the truth of every word. Should you be disposed to publish it in your excellent Review, it is at your service; but should you think enough has been said on the subject, I have not the slightest objection to its being converted into candle-lighters, it will thus *enlighten* some body, if it do not the wise ones of the field and garden.

I hope soon to send you the pest of our potato fields, the *Bantus trinotatus*, another Curculio, that I wish you to look out for; it is a fruitful source of *rot* in this neighborhood, though Entomologists deny that it *causes the rot*, for this reason, that it has never been discovered before; while they assure me that the vines and potatoes have been thoroughly examined—now "*if they have been thoroughly examined*," why was it left for me to discover the habits of the insect, which they all acknowledge I have done.

Will you not help me in this matter, and

try to find out for me whether such an insect is to be found in your region, I mean after I send you its history and habitat.

Very sincerely, yours, M. H. M.

To THE EDITOR: On looking over the long list of interesting articles in your Review, I have seen none that have given me more pleasure than those on the Curculio, its habits and destruction; and I now offer my mite to the mass of valuable matter already collected, hoping that the following brief history of the insect in its different stages of existence may relieve the subject of some of its embarrassments, and save much time and useless experiment.

The Plum curculio (*Rhynchonius nenuphar*, Harris,) may be found as early as the middle of March in Pennsylvania, and as late as the middle of August, *generally* on the ground near fruit trees, *frequently* slowly crawling up the trunks, or hid under the bark, or in crevices and dark hiding holes on or near the trees; when touched, or when the tree is violently shaken, they feign death, draw their legs close to their bodies and drop to the earth, where they remain as long as they suppose themselves observed.

The evening and early morning are best suited to their labors, though I have found them at all hours of the day, both at work and on the wing.

The female begins her work of destruction as soon as the fruit is set, boring a semi-circular hole with her proboscis, in which she deposits her egg, and then closes the hole by pressing the skin of the fruit down again with her proboscis, thus effectually securing the egg from rain or external injury; she deposits but one egg in a plum, but visits all within her reach, until her whole store of eggs is disposed of—she then falls to the earth and soon dies. The hatching of the

eggs is hastened or retarded, in accordance with the season:—if warm, a few days suffices to bring them into life—if cold, their development is retarded.

While young, the grubs feed in the pulpy portion of the fruit, where they do but little injury to its growth, but as they advance to maturity, and it is necessary to their future existence that they should be near the earth, they approach the stem, and by cutting off the free circulation of sap, cause the stem to wither, when plum and grub fall to the ground.

At this stage of their existence, their lives depend upon their being able to reach their earthy shelter with as little delay as possible, for both sun and rain are fatal to them, but they will pass through lime, salt, ashes, guano, etc., without injury to their tough coats.

If it be early in the season, the grubs remain near the surface, choosing a moist lump of hard earth, they hollow out a round cell, large enough to move about in comfortably; this they make perfectly smooth, then plaster it by rubbing their bodies incessantly against the sides of the cell, until it is polished; when this is done they remain quiet, having provided a habitation exactly suited to their wants. They now want no food, but require perfect repose while their limbs are gradually becoming matured, and this is a habitation that will equally protect them from evaporation and superfluous moisture.

The grubs remain in their cells from *four days to six months*, according to the time of year; if they be from the early fallen fruit, the time of change varies from four days to two weeks, and so on during the fruit season, but those from the last crop will penetrate deeply into the earth and remain unchanged in the larva state until spring, when they change to pupæ, and in a few days take the perfect form and appear above ground to begin their work of destruction.

These facts were ascertained by placing

newly fallen fruit in glass jars that had previously been nearly filled with earth, and covering the fruit with damp moss, and then pasting paper over the mouth of the jar, to prevent the escape of the insect. In two instances the grubs formed their cells against the sides of the jar, thus enabling me to watch them through their entire transformation.

There are generally three generations of Curculio, or, more properly speaking, R. nuphar in a year, and as they are equally fond of the peach and apricot, it is clearly the interest of all lovers of fruit, to join in a general war of extermination, and as this is best done while the grub is in the plum, a daily shaking of the trees is absolutely necessary, and a careful gathering of all the fallen fruit; nor should your solicitude rest here, for if the fruit be thrown aside, without being crushed or scalded, the grubs will make their escape and live as securely by the side of a road, or under the floor of a pig pen, as under their native tree.

Yours, respectfully,

M. H. M.

St. Louis, February, 1851.

MR. EDITOR: By inserting the following you may perhaps save some one the time, expense and disappointment I have experienced in the last four or five years, in following out the hundred and one remedies in guarding against the attacks of the Curculio.

Last year I varied my mode of warfare by spreading a thick coat of cement on the ground, under thirty-five plum trees, extending it to the full size of the top of the tree. As soon as the plum made its appearance from the blossom, say about the 10th of May, I commenced jarring the trees every morning and evening, and continued to do so, until the 1st of August, and as the insects fell upon the cement, killed them. The first three weeks, the average number was not far from fifty per day. From the 1st of June to

the 20th, nearly one hundred per day; after which time they gradually diminished.

Now for the result: From the thirty-five plum trees, comprising fifteen choice varieties, I saved only about two bushels.

It is argued by many, that this insect has great instinctive powers, and will not deposit its eggs where the fallen fruit is likely to encounter a pavement.

I know nothing about your eastern or northern Curculio, but I can assure you, Mr. Editor, no such repugnance is felt or known by this insect in Missouri, and further, that no pavement ever invented, where Curculios are numerous, will guard against their attacks, unless extended to every fruit tree in the garden or orchard. It is wholly inconsistent with the nature and habits of this insect, to suppose that paving under a few trees will protect the fruit, while others, near by, are unpaved, for the simple reason, that the curculio attacks nearly every description of fruit. The nectarine and plum are their favorites, but the apple, pear, peach, apricot, cherry and grape, are all subject to their attacks, and all serve absolutely as a means of reproduction.

I have taken the above mentioned fruits separately, placed each in different boxes of earth, and from four to six weeks the change from the larva to the perfect Curculio would be complete.

There are three distinct species of this insect, one smaller, and the other larger, than the plum Curculio. The small one is nearly round, about half the size of the plum Curculio, and is mostly found upon grapes. The other is full half a size larger, with a smooth shell and not near so numerous as either of the other kinds. Both of these insects, instead of making the well known crescent mark of the plum Curculio, perforate the fruit by boring a small round hole, in which they deposit their eggs with the same certainty of destroying it, as the plum Curculio.

During the time of jarring the trees, not a

day passed without finding more or less of the two new species above described, in about the following proportion. Plum Curculio 25, Small do. 8, Large do. 3.

At the proper season of the year, by watching their movements patiently, large numbers will be seen emerging from the ground, and after surveying their position, will follow the instinct with which nature has endowed them, by crawling up the tree instead of flying. I have often checked their progress in this way, by putting a thick piece of pasteboard around the tree in the shape of an inverted funnel, but their wings were soon brought into requisition to overcome the difficulty. They can apparently fly a great distance, and in high winds, are blown in every direction, for after such winds, I have often found them in different rooms, in the first and second story of the house.

Your readers will naturally say, all this is very well, but give us a remedy that will effectually guard against the enemy.

I can safely say, there is a remedy, and a philosophical one, which, if faithfully carried out, will insure good crops of fruit so far as Curculio are concerned. First, then, cut off all means of *reproduction* by picking up every description of fallen fruit two or three times a week, and subjecting it to some process that will effectually destroy grub or larva.

No advantage will be derived from this process the first year, for the Curculio is already in the ground; but the satisfaction of having a good crop of plums the second year, will well repay for all the trouble of picking up the fallen fruit.

I have studied the character and habits of this insect for the last ten years—have watched its movements for days and weeks—have tried every remedy published in the different agricultural and horticultural works, all of which have totally failed, excepting jarring the trees, and paving, and these have only proved partially successful.

By picking up every description of fallen fruit, no possible means are left for them to perpetuate their species. I am not aware that any means has ever yet been discovered, that the Curculio can in any other way propagate its species, than by depositing its eggs in some description of fruit, and whatever fruit that may be, it must come in contact with the earth in such a manner that the grub can escape, and bury itself beneath the surface.

No one can reasonably expect to be entirely exempt from this insect, as long as their neighbors are troubled with them, for some few will fly, or be blown into the trees under

any and every circumstance, unless completely shielded by some covering, or net work.

The most complete and accurate description of this insect, according to my own observations, has been given by M. H. Simpson of Massachusetts, in the June number of Downing's Horticulturist for 1850.

In this communication a remedy was given to guard against the Curculio, which proved eminently successful with Mr. Simpson and a Mr. Young of Kentucky, viz: syringing the trees with lime water. This remedy I have never tried. Very respectfully,

A SUBSCRIBER.

KITCHEN GARDEN—HERBS.

In this age of the world, cultivators rarely grow any thing that is not substantial and requisite for our necessary wants: they have too little regard for the aditamenta. How different is this from the variety of Nature's ordering! She provides vegetables for the support of the animal frame, good and excellent in their way; but she also attends to the refinements of our appetites, and gives us racy and spicy articles as condiments to the plainer and more substantial diet. Why are these so rare in our gardens? It appears to me that they are neglected because they are not known, for they have but to be seen and tasted to be appreciated. Who would ever again desire to eat many vegetables cooked alone, after they had eaten them properly combined with some of the aromatic herbs? The combination renders them not only more agreeable to the palate, but more acceptable to the stomach, and hence more digestible. Too often, however, even in the families of the wealthy, we find a lamentable ignorance of the importance of these combinations.

Cabbage, Okra, Carrots, Squashes, etc., all very nutritious vegetables, are too flat and insipid, if prepared alone; but become very

acceptable, if warmed up by the combination of some of the aromatic herbs.

The cultivation of the Herbs is very simple; they require little space, and no more attention than other things. They are at command every day in the year, either green or dry, and embrace a great variety, from the simplest condiment to the active articles in the drug store. I shall only mention a few which should be grown and used by every body with vegetables.

Rosemary, *Rosmarinus officinalis*, a dwarf, shrubby evergreen perennial. Of its three varieties, the common, mentioned above, is the most desirable; it is warm and high flavored.

Another is common Thyme, *Thymus vulgaris*, and the Lemon Thyme, *Thymus citriodorus*, both of which are so common that every body knows them; but I should be glad to see them more universally applied;—they are agreeable in stuffings and in soups.

Winter Savory, *Saturea montana*, is a very dwarf evergreen perennial; Summer Savory, *S. hortensis*, is an annual; both are valuable for their excellent flavor; the latter should be cut when in flower, and dried.

Marjoram, of three species, is a very warm

stomachic of great value for its fine flavor, and may be applied to many dishes with advantage.

One of the very best herbs is the Taragon or Esteragon, *Artemisia dracunculus*. It is an herbaceous perennial, and so hot that a little will suffice. It may be dried, or steeped in vinegar, to qualify it for salad dressings, for which it is so much esteemed. I recommend this herb especially, as a valuable addition to many dishes. It should be cut when in blossom, if dried for winter use.

The different kinds of Mint are too well known to need any notice. There are two kinds of Basil which are powerfully aromatic annuals, and require some care to grow them. Sage, Hyssop, Dill, Coriander, Marygold, Parsley and others might be mentioned, and may claim our attention at another time. The Herbs are a neglected race, and should be noticed.

JAMES STEWART.

Memphis, Tenn., February, 1851.

HOT-BEDS.

FORCING vegetables is a very necessary process in this climate, where the late frosts and cold wet weather are always liable to injure the many tender young vegetables which are so desirable for our tables; and by this means, with proper management, we may have the plants well grown, and ready for setting out in the open ground in May, instead of then only sowing the seeds.

This forcing process may be applied to a great variety of plants, and is constantly in use among our sagacious market gardeners, who furnish us with so bountiful a supply of the finest salads, radishes, etc., etc., throughout inclement winter and spring months, that our market is noted among travelers as one of the best in the country. The amateur may wish to know how to force a few early vegetables, and without some knowledge and constant exercise of *common sense*, he will surely fail.

The following admirably *sensible* remarks upon the construction and management of Hot-Beds, are from one of the most successful growers of vegetables as well as of exotic flowering plants. ANTHONY PFEIFFER is as well known for his beautiful *Salads*, Cauliflowers, and other vegetables, as for his fragrant Hyacinths, and Roses, and beautiful

Camellias, Azaleas, Cinerarias, and other green-house and garden favorites.—ED. REV.

Hot-Beds may be made at any time through the winter or early spring, according to the object you have in view. It is still time for the private gardener to start his beds, and I will tell him how to do it.

First—as to the *manure*. This should be fresh horse dung, with plenty of straw. Throw it down in a pile, and let it pass through its first heat or fermentation. Some persons fork it over with a great deal of care, and turn it several times, which makes a more lasting bed; but we can keep up the heat by linings around outside, and this will be found to be the cheaper plan.

The Frame may be made by nailing four boards together, the ends being sloped from the back to the front, so as to give the sash about one foot fall in six feet. There must be cross ties every three feet to fit the joints between the sash, which rest upon them.

Instead of nailing the boards together, I frequently set up posts, four, or, better, six inches square, of the height I want my beds, and nail on cheap boards, lining inside and outside, and fill in between with manure. In making up a bed, I sometimes dig out the

ground a foot or so, if I wish to make a very thick bed, for cucumbers, or any thing that requires great heat; but the beds are generally placed on the level ground, and are not more than a foot or eighteen inches high.

The *Soil* should have been kept under shelter so as to be *dry*. This I consider very important, as many plants will otherwise suffer from damp and mildew. This should be placed upon the dung, and within the frame, after the first heat has passed, and it should be brought as near to the glass as possible, especially in front. Do not sow any seeds until the first heat has been spent—this may be a week or longer.

Lining or renewing a hot-bed is simply the application of fresh, hot manure around the outside. By this means, any amount of heat may be produced and kept up from time to time, according to the wants of the plants.

The selection of the *Sash* is a matter of great importance. I find the most convenient size is six feet three inches long, by three feet wide. The glass may be eight by ten, or, still better and stronger, eight by six inches. This form and size is the most easily handled.

Covering the beds at night, is quite necessary in cold weather, as the heat escapes very freely. The best and cheapest mats are home-made, and formed of rye straw tied together with strong strings by a very simple plan—which is easier to show than to tell. These mats are very easily rolled up and taken off in the morning to let the sun shine on the plants, and at night they are very quickly thrown on to the frames and unrolled.

Air is necessary to all growing plants, and must be admitted by raising the sash—little blocks should be placed under one end of the sashes whenever the weather will admit.

EDITORIAL NOTICES.

To Readers and Correspondents.

You must excuse the additional amount of printed paper sent you this month, for in spite of the increased size of the Review, several articles, prepared and printed for this number, have been unavoidably set aside to give place for other matter, which it was essential to have inserted. Some valuable communications are also retained and Reviews withheld: indeed, it is a subject of congratulation, that so many kind friends have nibbled their pens in the cause of western horticulture, and that a good supply of matter is on hand for future numbers. Still the question has been asked, why do we not hear from certain other giants of the west? Echo answers—(not the Editor): he has appealed to them and continues to do so, and trusts that they will show their strength. Communications are always gladly received, but the earlier they are sent in, the greater

the prospect of their appearance in an early number.

One more subject is feelingly brought before you—all of you who feel an interest in the great West, or a pride in western enterprise. *Do you wish to see this work sustained?* If so, bestir yourselves in its behalf, not on my account, but your own. Let every man who feels this pride exert himself to procure *five* subscribers, and help to swell the list to five thousand, so as to sustain the undertaking. There is no reason why there should not be ten thousand copies issued. All are requested to act as agents.

Answers to Correspondents.

T. A., Miss. *Iron Rafters*, such as are used in Mr. Resor's greenhouse, cost five and a half cents per lb., if cast with the patterns already made; length fourteen feet or less. The weight of the full length is twenty-four

pounds, or about, one pound and seven-tenths per foot. The rafters are placed seven inches apart, and the glass is cut seven inches by ten. Hartley's rolled glass may be had of any size and shape, from Liverpool.

Catawba Grape Roots and Cuttings, S. B., *New York*.—Fine, strong two-year old plants may be had here at \$40 per thousand, and such are much better for transportation than yearling plants, which are too feeble to bear a long journey; the latter may be had for \$20 per thousand. Isabella vines are scarce, and command a higher rate; they are sold by the small quantity for twenty-five cents a piece. Herbemont and Missouri are also in demand, and at high prices. Catawba cuttings may purchased at from two to five dollars per thousand.

J. O'D., of *Philadelphia, Pa.*, is informed that good gardeners receive a fair remuneration for their services in Cincinnati and other western cities, provided, always, the parties can bring good recommendations of character and qualification, and especially a modicum of that vulgar article, *common sense*, which is here considered an essential commodity in a gardener's composition.

W. E., *Lexington, Ky.*—Well may you ask, why do not some of our cultivators about Cincinnati take up the glove and reply to your queries in a former number. I don't despair of them yet, but in their default shall be glad to hear from yourself.

W. E. will find an answer to one of his queries, which has just arrived from the extreme North. A similar plan has been adopted, to some extent, here.

Kelley's Island, February, 1851.

DEAR SIR: In the January number of the Review, is an inquiry respecting the trellis, for vineyard culture of the grapevine.

Having experimented to some extent with trellises, I will describe a kind I am now put-

ting up, which my experience with wire trellis has induced me to adopt.

I commence two feet outside of the first vine in the row, and set posts of any good durable timber fifty feet apart; those, at the ends of the line, should be set deeply and firmly.

Now, at twenty, forty and sixty inches from the ground, bore half inch holes, and pass through them good annealed wire, about No. 8 or 9. When you have gone through a row, or as far as the wire will reach, make fast at an end post, by driving into the hole from the outside, a pin of hard wood, leaving out three or four inches of wire, which wind around the pin close to the post, and it will never pull through. Draw the wire tight at the opposite end, and secure in the same way.

If at any time intermediate supports are wanted, use a stake three inches thick with small notches cut obliquely downward with a handsaw, to receive the wire, and fasten it with a shingle nail; this is sufficient, and may be easily put up.

This can be built for less than a wooden trellis, is more durable and more convenient, Thorough annealing is a better preventive of rust, than paint or ordinary galvanism. (?)

At the winter pruning I pass the shoots to the right or left of the stalk, at an angle of 30° or 40°, to wires of suitable height for their length, bend the vine obliquely round the wire, and tie the ends. It then never gets down, even though the tie should break; for the fruit hangs on both sides of the wire. Then train the new shoots perpendicularly, and the whole plant will be freely exposed to the sun and air. C. C.

J. McCONNELL, *Clayville, Ky.*—*Osage Orange* plants are selling at \$15 per thousand, good plants; the seed has been scarce, and very little really good seed has come to market. A large parcel of one or two hun-

dred bushels is said to have arrived recently, which is offered at \$40 per bushel.

J. W., *Indianapolis, Ia.*—*Rapberries*.—Most of the finest kinds have proved tender, and need some slight protection in the winter, though some seasons they escape.

L. SANDERS, *Grass Hills, Ky.*—*Rawle's Janet*.—The inquiry about this apple shall be answered so soon as access can be had to the necessary documents. For the present, it will suffice to say, that the Cincinnati Horticultural Society fully appreciates the difficulty to be apprehended from having too many synonyms for fruits, and respects as highly as yourself the time-honored appellations, when they are not likely to be confounded with those of other varieties well established and known. Thus in the case before us, Genneting, by a false pronunciation, is very easily confounded with Jonathan and Juneating—and this has so often occurred among our members, that we gladly availed ourselves of the title to which you object, *Rawle's Janet*, which originated in Kentucky where the apple is best known. I hope that Lawrence Young will speak out upon this subject; no one better understands this matter than he and his neighbor, H. P. Byram of Louisville, Ky.

From the Prairie Farmer.

Bois d'arch-1-ana.

MESSEURS. EDITORS: Will gentlemen who are engaged in raising this truly wonderful shrub and hedge plant, please inform the numerous readers of the *Prairie Farmer*, and the world, if old nature was ever twistified so completely as to allow a good, substantial, practicable and durable hedge to be made from a species of tree which, in its native soil and climate, grows to the height of sixty feet, and two feet in diameter?

And if a hedge of the above description can be made, what will be the annual cost of shearing and keeping such a hedge at a proper height and width? And whether any "live yankees" has yet appeared, under the direc-

tion of the *wind-workers*, with the contemplated machine, propelled by steam, for shearing these prospective hedges? And whether the amount of brush thus clipped from the hedge-row is any more than sufficient to supply said machine with fuel? And, if so, could not the overplus be profitably employed in the construction of cross fences? And, if such a hedge can be made, how many persons are there out of every hundred who are capable and have the necessary skill to do it? Has any one ever seen a perfect hedge of the above shrub, seven years old? or, has he ever heard of one who has?

Have those who are engaged in this "internal improvement system" perfect confidence that they are doing the *clean thing*? Do they suppose that the "dear people" will have cause to raise their voices in one united shout and call them "blessed."

If gentlemen can sustain, make it appear, and prove that said shrub is all that is contended for it, viz: that it will make a cheaper, better, more durable and efficient fence; one that every clod-hopper can make; one that will, in fact, keep all order loving quadrupeds in, and all strolling bipeds out—why, then, THE WORLD SHOULD KNOW IT. If not, let it be among the things that *used to was*.

Gentlemen, shall the world hear from you?
HUMANITAS.

Maclura Aurantiaca, Jan., 1851.

HORTICULTURE EXTENDING ITS AREA.—SOME of our nurserymen are filling orders for California. I. C. Ferris says he has sent two thousand fruit trees to San Francisco.

D. McAvoy is frequently seen packing his tin boxes of seeds for similar destination.

Acknowledgments.


TO EDWARD WILSON, of Louisville, for a very pretty seedling *Camellia*. The flower nicely packed, was nevertheless somewhat injured by the cold weather, or possibly by contact with the paper placed above it as a protection.

The colors are delicate pink, with narrow stripes, or splashes of rose running toward the base of the petals. Mr. Wilson has the thanks of the Editor, and the florists of Cincinnati, for the opportunity thus afforded us

of seeing his new seedling. May we hope for many similar civilities.

Dr. T. W. S. CONNERT, of Versailles, Ia., whose sensible letter appears in this number, also furnished some of the best specimens of Baldwin, Pryor's Red and Broadwell Sweet apples, which have ever been exhibited here.

Such contributions are highly valued by the Editor, who desires to extend and perfect his knowledge of fruits and flowers, by seeing specimens from every quarter, and he will thankfully receive anything new, rare or fine, from his friends throughout the country.

 THE following letter from the woods is cheering to the Editor, and is only a sample of numerous epistles of similar character:

Hog Wallow, Opossum Run, }
Preble Co., O., Feb. 17, '51. }

DEAR DOCTOR: Inclosed are the funds for the first volume of your excellent work. I regret to inform you that we are too much in the woods, generally speaking, to duly appreciate its merits, and I opine the great mass of the people will the longer continue there, by thus adhering to first principles.

We have an Eden-like country hereabout, were it cultivated and adorned as it should be; and I have the fond hope that ere long the good people of "old Preble," will wake up to their own *interests* and *comfort*, and imitate their brethren in Hamilton county in "Fruits, Shrubs and Flowers."

Yours, truly, —————

CITY GARDENS.

In passing along our streets, it is very pleasant to see the windows full of plants, which are so abundantly and cheaply furnished in our markets. Next to this pleasure is the higher enjoyment of beholding a handsome and neatly kept little gem of a garden in front of a modestly receding house, which seems to withdraw from the street, not only for greater quiet, but for the sake of exhibiting the refined taste of its proprietor, as shown

by the neatly trimmed and richly stocked *city garden*, which is put forward for the benefit of the weary valetudinarian passing by, to refresh his drooping spirits, instead of being selfishly pushed back behind the brick walls.

Every person who promenades Fourth st., must feel under obligations to our excellent friend, A. G. Burt, for the good taste and liberality he has displayed in the arrangement of his grounds. May he have many imitators, and rivals. Our gardeners will never complain of the rivalry of such *Amateurs*.

NOTICES.

THE AMERICAN SCIENTIFIC ASSOCIATION will assemble in Cincinnati on the first Monday in May, at which time we hope to have all the most learned savans of our country present. Every department of knowledge is to be represented, but especially the exact sciences.

The Committee of Arrangements are already making the necessary preparations for the reception and entertainment of the distinguished guests.

As it is desirable to know who will take an interest in this meeting, all the colleges are requested to send their circulars with lists of their Faculty to Prof. Rainey, Secretary of the Association, Cincinnati.

American Medical Association.

THE fourth annual meeting will be held at Charleston, S. C., on the first Tuesday, 6th of May next.

Communications intended for the next meeting must be addressed to the Secretary, Dr. H. W. De Saussure, Charleston, S. C.

Cincinnati Horticultural Society, Exhibitions for 1851.

LET it be remembered by all, whether citizens or others abroad, who feel any interest in horticultural shows, and may wish to visit our city, that our Society will hold its Spring Exhibition of Greenhouse plants and forced

vegetables, etc., in the first week of May. For early fruits and garden flowers, on the first Saturday in June. For summer fruits, etc., on the first Saturday in July; and again on the first Saturday in August. For peaches, plums, pears, apples and other fall fruits, on the first Saturday in September.

And the great Autumnal Exhibition of fruits, flowers and vegetables will be held on Wednesday, Thursday and Friday, the 24th, 25th, and 26th days of September.

THE AMERICAN WINE GROWERS' ASSOCIATION OF CINCINNATI, meets on the first Saturday of every month—for discussions respecting the best methods of culture and management.

State Agricultural Fairs.

THE State Board of Agriculture have appointed the 17th, 18th and 19th days of September for holding the great Annual Agricultural Fair for this State.


THE New York State Fair will be held at Rochester on the same days, which will be unfortunate for those of us who are so patriotic as to prefer attending our own exhibition, which it is fondly hoped will be the fact, at least with those among us who may have any thing to exhibit.

A Silver Cup,

is offered for the best and most appropriate NAME for the new establishment of a public watering place near Xenia.


A committee of gentlemen of taste and judgment is appointed, to whom the communications will be referred.

An Indian name will probably be preferred, as the springs are in a region which was famous in the days of Indian warfare.

 WIRE FENCES are becoming more and more admired—if we can say this of a thing that is *invisible*—and this is its chief beauty. A good supply of all sizes, may be seen at all times, at the wire-working establishment

of Mr. W. Bromwell, on Walnut street between 4th and 5th streets.

The best of all garden *ties* may be found there also, in the shape of lead wire, which is so admirably suited to the wants of the gardener—an indestructible substance that never cuts the bark.

 See WESTERN HORTICULTURAL ADVERTISER for April.

Cheap Houses—Sunburnt Bricks—Suburban Village.

In the neighborhood of this city there is a house built of dried clay, which material is said to possess the great advantages of cheapness, warmth in winter and coolness in summer. This is no new experiment, having been practiced for centuries in some parts of world. The whole subject was very forcibly presented to the farmers of this county, at one of their annual fairs, by the late lamented Harrison, who had been on a mission to South America, and there made his observations. The plan he recommended, and that frequently pursued, was different from the one here alluded to, which has been executed by W. S. CHAPMAN at his beautiful place, LINWOOD, which shall be more thoroughly discussed at a future time. It is understood that this commanding site, which overlooks the broad valley of the Miami, is likely to become one of the most attractive spots in our vicinity, for those who wish to enjoy the delights of the country without the labor, vexation and expense, of a country seat. Mr. Chapman is about to appropriate his grounds to a SUBURBAN VILLAGE, an idea new to us in the West, but which is said to have been successfully carried out in other places. A street which winds around near the crest of the hill, will on one side, give access to the building lots, with their beautiful prospect, and on the other, will inclose a handsome lawn of thirty acres, to be dedicated as a park for the use and enjoyment of the village. I cannot

now go into a detail of the many charms and advantages of this kind of country life, which indeed, deserve a separate chapter for their consideration, and shall receive an early notice.

METEOROLOGY.

THIS important subject should claim a large share of the attention of the gardener, as well as of him who takes a philosophical view of nature—as with the health of animals, so with that of plants also, much depends upon the temperature. The *mean* temperature for the year is the safest point for comparison between different climates, when estimating their adaptation to any plant in question, and this, too, has more importance than the extremes, or sudden alternations, although these have their weight also, with some families of plants which never can bear certain limits in either direction. The mean temperature of the year in any given locality, is nearly a constant quantity during a long period, unless modified, as many of us have seen it, by the changes wrought by man upon the surface of the country; clearing, draining, and otherwise affecting the hydrometric condition of the atmosphere, and thus the temperature.

Entertaining so high an estimate, so keen an appreciation of the value of such tables, the record of the observations of Mr. John Lea, are regularly procured and printed in this work—and beside them the remarks appended to the tables in the *SCHOOL FRIEND*, by Dr. Jos. Ray, are also copied, from time to time.

In addition to these, the reader will find in the seventh number some valuable tables reduced from the record which has been kept by J. McD. Mathews, at Hillsborough, Ohio.

To S. S. Jackson, I am indebted for MS. tables of the weather, and progress of vegetation, effects upon the crops, etc., kept by his father, and running back to the year 1844. These valuable records are in hand to be reduced for future use; being a long series, they will possess the greatest interest to all who

would study the great problems of climate. I consider them a treasure of no mean value, and shall be very happy to publish them, so soon as they can be prepared.

Effects of the Variable Weather of the present Winter.

As usual, there is a great deal croaking in advance about the fruit crops, and the injury they have suffered and will sustain. In this neighborhood it is believed that there are plenty of blossom buds which are still safe, and have escaped the blighting effects of frosts commonly spoken of as winter-killed, and believed to be owing, whether in budded or seedling varieties, to the sudden transitions, rather than to extreme depressions of the temperature alone.

The subjoined remarks are portions of a letter from my valued friend, J. Kinnicott, of Northfield, Cook Co., Ill., near Chicago, dated Feb. 15, 1851:

DOCTOR: This winter has been a warm one—an “open winter”—and yet one of the very worst for the farmer, and poor Horticulturists, that I remember.

This is, emphatically, a changeable climate; and it has outdone itself, this winter—the mercury ranging from 60° above to 20° below zero. Last night it stood at 46° above; this morning down to 24°. To-morrow we may expect it down to 10° or 12°, and on Monday or Tuesday, up to 40° again. My instrument is out-doors, north side of a building, and under a veranda, facing north-west. The *extremes* have been greater, but I never knew the *changes* more rapid—frequently 20° to 30° in a few hours.

The peach buds, which were very promising, are all marked with the “black spot” at the heart, so hateful to the Pomologist—and the branches of many fruit, and ornamental trees, and shrubs, generally considered *hardy*, are more or less winter-killed, as is now plainly seen; and the hot sun of June may yet develop the incipient gangrene in many a tree which now shows no sign of disease. I fear that we shall be compelled to give up many fruits here, in “the Lake region,” that are hardy, fifty miles off.

METEOROLOGICAL TABLE.

CINCINNATI, FEBRUARY, 1851.

THERMOM'R			WEATHER.			RAIN.
Date.	Minl.	Maxi.	Sunrise.	Noon.	Sunset.	
1	24	37	cloudy	cloudy	cloudy	
2	32	36	snow	snow	snow	
3	33	36	cloudy	cloudy	cloudy	
4	34	40	do	clear	clear	
5	35	52	variable	do	do	
6	35	49	do	cloudy	do	
7	27	28	clear	clear	do	
8	34	64	do	do	do	
9	54	54	rain	rain	rain	1.45
10	42	59	rain, cl'y	variable	cloudy	0.10
11	30	31	snow	do	do	
12	24	40	clear	clear	clear	
13	35	46	cl'r, haze	rain	cloudy	.10
14	49	56	rain	cloudy	do	.40
15	32	53	do	clear	do	.90
16	20	29	clear	do	clear	
17	18	37	do	do	do	
18	30	45	haze, cl'r	do	do	
19	31	54	fog, var	variable	rain	.30
20	50	55	cloudy	rain	do	.80
21	45	54	do	clear	variable	
22	39	53	do	do	clear	
23	44	59	cl'y, rain	cloudy	cloudy	.40
24	51	58	do do	clear	clear	.10
25	34	54	clear	do	do	
26	46	69	variable	do	do	
27	43	60	rain	cloudy	rain	1.10
28	32	33	cloudy	do	variable	

Rain in the month, Inches..... 5.65

Snow fell on the 2d to the depth of 4.75 inches.

do do 11th do 0.50 do

The highest temp. on the 15th and 27th was at sunrise.

Depth of rain and snow water 6.15 inches.

Mean temperature of the month.....42.48

Do do Feb. 1850.....35.66

Do do do 1849.....32.43

Do do do 1848.....38.60

Do do do 1847.....37.33

Do do do 1846.....36.35

Do do do 1845.....42.12

Mean for Feb. for the above 7 years....37.84

Clear days in the month,..... 8

Variable (cloudy at times).....12

Cloudy (sun not visible)..... 8

Calm more or less on 15 days;

Light winds on a portion of 26 days;

Brisk breezes on part of 7 days;

High wind at night on the 5th;

No storm in the month;

Highest temp. the month, (26th).....69°

Lowest..... (17th).....18

Range.....51

Least daily variation, (9th).....00

Mean temp. of the 3 winter months...38.01

REMARKS.—The weather in this month has been warmer than that of any other February I have on record, and near 5° above the mean of that month for the last 7 years.

The very large proportion of light winds and calms, cause the cold to be felt here much less sensibly than when high winds are frequent, and may be considered equivalent to 10° or 12° of temp. The past winter was unusually mild.

JOHN LEA.

WINTER OF 1850-'51.—By winter, in meteorological reckoning is understood the period from December 1st to March 1st—90 days. The average of the last sixteen winters giving for the mean temperature 34 degrees. The mean temperature of the past winter is 37° 7, and with the exception of the winter of 1844-5, is the warmest at Cincinnati, in the last sixteen years. The winter of 1844-5 was about a third of a degree warmer than the past winter, and was succeeded by a warm and pleasant spring.

The whole amount of rain and melted snow in the past winter is 13.12 inches, which is a little above the average, notwithstanding the extreme dryness of January. The amount of snow is the least in the last twelve winters, and is only about one-eighth of the amount in the winter of 1849-'50.—Dr RAY, in *Chronicle and Atlas*.

Observations for January.

BY JOSEPH RAY, M. D.

The mean temperature of this month is about 3 degrees higher than that of the last 16 years; it is, however, half a degree less than the mean temperature of January, 1850.

The remarkable features of this month are, the small quantity of rain and almost total absence of snow, and two sudden and great depressions of temperature; the mercury falling in one case 47 degrees, and in the other 44 degrees in about 18 hours.

The first of these exceeds by 1 degree, the greatest change noticed at Cincinnati during the last sixteen years, and was truly a transition from the heat of summer to the cold of winter. It was, in fact, even more than this, for the difference between the mean temperature of summer and that of winter, at Cincinnati, for the last sixteen years, is just 40 degrees.

The rise of the Barometer was as distinctly marked as the fall of the Thermometer. At 12 M., January 16th, it stood at 28.79 inches, and at 12 M., 17th, at 29.622 inches, making a change of .832 inches in 24 hours. In the first 18 hours of this period, the change was .75 inches.

Reckoning the weight of a cubic inch of mercury at .491 pounds, and the surface of an individual of ordinary size at 140 square feet, the difference of external atmospheric pressure sustained by an individual between the 16th and 17th, would be nearly half a ton—a quantity quite sufficient to account for the altered state of feelings experienced by nervous and dyspeptic invalids.

The quantity of rain is about one-eighth of the average, while this is the only month of January in the last nine years in which there has been a total absence of snow. The temperature, though above the mean, is not so great as to lead to the belief that it has exerted a very injurious influence on fruit trees and plants, especially when the very dry weather is taken into account. In the last seventeen years there have been six months of January warmer than the present. The warmest of these was in 1839, of which the mean temperature was 2 degrees higher than in January, 1851.

UNIV. OF
CALIFORNIA





Vol. I.

APRIL, 1851.

No. 7.

SUMMER RETREATS.

SINCE the issue of the last number, an arrival is to be announced—not of a distinguished stranger from foreign lands, but of one who has been a frequent visitor to many of us, and, being a periodical and annual visitant, one that has been oftenest seen by those of us who are oldest, though always most welcome to those who are youngest among us, as being coincident with the buoyant feelings of youth:—Spring has come—with her delightful charms: the currents of life flow more freely; the icy bonds of old winter having yielded beneath her genial influences, so should our spirits also unbend from their hyemal rigidity, and relax more and more from the staid and sober dignities. The charms of Spring are so attractive and seductive that all, whether young or old, must acknowledge their influence.

The banks and braes and sylvan retreats of every kind will become the favorite resorts. The drawing-rooms and the fashionable promenades must, to a certain extent, be deserted by those who can flock out to the country to enjoy its sweets at this delicious season; the balmy influences of spring are of a character to be within the comprehension of all; who cannot appreciate them? What though croakers do tell us of cutting frosts, in the history of the past, and foretell of a return of winter

to blast our hopes for the future. Such has been, and may again be the course of our climate at this season—let us enjoy the present, in the matter of sunshine, nor be alarmed from our appreciation of a balmy day e'en though "winter lingering should chill the lap of May."

Our springs soon glide away amid the alternations from chilling blasts to genial zephyr. Vegetation advances, and the temperature rises with the increasing heat, when, lo! summer is upon us, with her burning heats ere we have fairly appreciated the advent of lovely spring. Then the hot, sultry and dusty atmosphere is oppressively felt by the poor, pent-up dwellers in cities, to whom a sufficient supply of dirt and smoke, as well as bustle and hurry are always granted, and to whom these elements of discomfort will soon become insupportable.

What then is to become of the poor cit in his miserable home? Shall he choke and die in the dust? No,—not while his locomotive powers will enable him to escape. He will most gladly flee to the quiet shades, and pure invigorating airs of the country, to relax his overtasked energies and to replenish his necessary stock of health and vigor for recommencing his fatiguing course of city la-

bors, which are only suspended, and soon to be resumed.

The first question that arises, is, whither shall he fly? Where shall he lay his head? Traveling about from place to place, sight-seeing, is sufficiently amusing to many, and the change of excitement from that of business to that of pleasure, with the accompanying change of air, will afford the relief that is sought. This, however, is not what most persons need—*rest* as well as recreation and pure air are the desiderata with the majority of those who seek to escape from the city's duties and excitements, and this, without too great expense; traveling does not afford rest, nor is it economical. A tired friend used to observe, in frequent journeys, when some one was descanting upon the delights of locomotion, "well, I think the great charm of traveling consists in reaching the *end* in safety," and the charms of the journey are all dependant upon the result.

The country villages are the first and most accessible points that suggest themselves to the escaped citizen—these have their advantages and also their disadvantages—the post office and other town fancies, keep up a connection with the great world which your true townsman is unwilling entirely to relinquish the paved walks enable him to take his morning promenade without suffering from the damp of wet grass, the stores remind him of business, and he does not feel entirely banished from society. The females of the family too, can enjoy that never ceasing, absolutely necessary excitement of shopping, without which some would suffer constant ennui.

Those who possess a country villa, or even a little box on a grassy lawn, will, in their own way, enjoy their sylvan shades and quiet comforts, needing nothing more. But these are the favored few—nor do all, even of these, think it possible to remain stationary for the few short summer months, but must jaunt

away to seek pleasures elsewhere. It is a good feature of our civilization, that country residences for all or part of the year, are becoming more and more desired by our people; a great change is effected in this particular, and the taste is constantly increasing.

Suburban villages will spring up all around our large cities; we have several in the prospective here, and it is sincerely hoped they may succeed. If well located, properly laid out, and judiciously arranged and governed, they will undoubtedly be very extensively patronized.

Watering places are a favorite resort for many of our citizens, and this mode of spending the hot months of summer is very attractive, especially when they furnish the privacy of a home with the conveniences of a Hotel, and entire release from the cares and duties of housekeeping. This is now offered in the most happy manner to our towns people, and they will have the good taste to accept the offer and appreciate the combined charms and advantages of the public Hotel, the attractive watering place, with parks, and trees, and bubbling springs, and beside all this, the private cottage, as in a suburban village.

Such an array of advantages is presented by Mr. E. F. DRAKE, a well known citizen of Xenia, who has associated with him some gentlemen of taste, for the sake of carrying out this project.

A large hotel is nearly built in the midst of the forest—beautiful lawns are laid out on either front of this central edifice, and these are to be flanked with tasteful cottages to be erected by the proprietors and by those who choose to become subscribers or lot-holders. Transient visitors will be lodged at the hotel, while all who wish to enjoy the springs will purchase a lot and build a cottage, or rent one of those put up by the proprietors. In these they may enjoy all the quiet of home, and at the same time have easy access to the

public table, and thus escape all the fatigues and trouble of keeping house, and meet as little or as much society as may be desired. The public lawns and springs will be ever open before them, dedicated to the visitors, and here amid the shade of noble trees, and upon beautiful knolls reached by graded paths, the perfection of a country retreat will be always at hand.

The cottages upon the front lawn will be erected in a style that shall conform to the architectural design of the main building, and from the long piazzas of the hotel the whole will present a very pretty effect, an undulating surface, with a sheet of water, overhung by fine trees, and the whole skirted by neat cottages of varying size and design, but all in harmony, and all accessible by a covered way which is to be erected by the proprietors, and which with the piazzas will furnish a promenade in all weathers.

These springs are, as yet, without a name, but will soon be provided with one, for which a silver cup is offered, and the selection shall be presented so soon as it is known. They are situated in a delightful primitive forest of various trees, the surface gently undulating in some parts, running out into bold abrupt ridges in others, and intersected by wild ravines, and abundantly supplied with bubbling springs of varied qualities, gushing out of the pebbly gravel, in every direction. These fountains may exercise the poetic and classic tastes of visitors through many *seasons* before they can all be provided with characteristic names; whether a silver cup will be offered for each successive name that may be chosen for each fountlet, the writer is not informed, but he opines that much merriment will be furnished from this source.

These springs, are destined to become a favorite resort during the summer months. They are accessible by railroad, near one of the most agreeable of our inland towns, with

good roads and pleasant drives in different directions, and situated in the midst of an extremely beautiful country, remarkable for salubrity, and peopled by an honest and intelligent race.

A brief outline of the situation of the springs themselves, has already been given, and their environage of native forest trees, beneath which a botanist may amuse himself with a flora that is exceedingly interesting and which contains some peculiar plants.

The geologist may embrace the best opportunity of studying the "drift theory" in this neighborhood, among the gravels and boulders which abound over all the surface, and in the ravines he will find the union of our two limestones, the upper or grey occurring in the hills, and presenting the diluvial grooves and scratches that carry him back to the age of the Glacier period.

Meanwhile the naturalist may pursue his favorite department, either in the birds and animals of the forest, or in the shells and fishes of the streams, as Massie's Creek, the Indian To-wa-wah, (anglicé, Clear-water,) is in the immediate neighborhood, and its broad prairies open an expansive view from the windows of the hotel and from many points of the grounds.

The invalid will meanwhile be invigorated by his rambles from one bubbling *source* to another; seeking health from the limpid waters of the powerful Chalybeate upon the lawn, amid the cheering influences of the company; or, more retiring, he will steal quietly along one of the silent dells to some more strongly impregnated iron spring; or, if sulphurous water be preferred, he will descend to the more turbid pool, half hidden in a cave, in a deep ravine, on the south.

Those who favor hydropathy, may be gratified; and who will not favor at least copious *libations* and free *lavations* of the pure elements? Our friend Dr. Sillsbee, who is the

genius loci, intends erecting numerous baths, a health department, for the benefit of all those who desire to be "*packed,*" "*sitzed,*" "*douched,*" or sprinkled in any way with the pure element; as well as vapor and medicated baths, with which he has been long familiar.

As to the cold meat diet, so necessary to the success of this system of medical treatment; most of the visitors at the springs will, we doubt not, prefer that he should erect his own dining room for the cold victuallers, rather than incur the possibility of

mistaking a hydropathic chair:—but that is a matter of taste—*de gustibus non*, as Horace says. The landlord will provide his table abundantly, *hotly*, and tastefully.

Success to the Springs—may their *shadows* never be less, while the umbrageous beech and other primitive monarchs of the forest, continue to fling their protecting arms around these fountains and wave their verdant foliage, inviting the smothering citizen to come and refresh himself at this retreat.

MY FLOWERS.

THE readers of the Western Horticultural Review, have already seen one of the sketches of a series, written in a very pleasant style, by a sister gardener. The Editor trusts that all will agree with him in admiring them—they are chaste, elevated, and at the same time practical, while a beautiful vein of feminine piety pervades them.

Agreeing perfectly with the writer, that woman should bear a portion of our joys as well as sorrows, the opening paragraph is particularly commended to the reader—and, to our fair friends, a further invitation is now extended, urging them to come to the rescue, and aid the Editor in his determination to make this periodical more and more worthy: and equally acceptable to "the ladies as well as to the lords of creation." To the sex shall we not all say—we languish without your smiles? Certainly, in this country, so complimented for the chivalry of its sons, no such undertaking as this can flourish without the encouraging support of those who, by their very nature, can appreciate so much better than men, the charms of an Eden.

Books—especially periodicals—addressed solely to man, lose half their charms, and much of their usefulness. There are ladies

of the creation as well as lords, and in this our bright and happy land, enlightened by a far more glorious sun than that which shines on its material structure, woman takes her share in every department where bodily strength is not required, and is the delighted partner of all her husband's, or father's, or brother's tastes and intellectual enjoyments. A periodical, to be *perfect*, needs the delicate tinting imparted by a lady's hand, so that it may not be laid by on the dusty shelf of the husband, but take its place on the work-table of the wife; and I will venture to say, much of its success may depend upon the approbation of those, whose influence upon society, though perhaps not glaringly apparent, is deeply and intensely felt.

I address myself, therefore, exclusively to wives and daughters. It will give me great pleasure to impart my country feelings and floricultural experience to "my sisters;" and should I be the means of awakening a dormant taste, or increasing the growing fancy of a single individual, I shall feel myself abundantly recompensed.

A flower-garden is a great resource to a lady. We have, in our rather limited sphere, a good deal to suffer, and a good deal to make the best of, and, in each case, our minds seem healed and mollified by the sight and smell of our gay and fragrant parterres. A flower, too, is a sermon—it preaches to our hearts and minds—it speaks to us loudly and powerfully of the tender love of our and its Creator—and it declares impressively also, this

solemn and salutary truth, "man is as a flower of the field." We are taught, too, how wise, as well as how pleasant it is, to look for all we need spiritually and temporally from our heavenly Father—"How much more shall he clothe you, oh ye of little faith." Thus in every way our garden is a kind of benefactor—it gives us moral health and physical health—pleasure and profit—recollection, and sometimes a blessed forgetfulness. I can truly say, that few moments are more exhilarating than that in which I unfold and arrange my large checked apron—plunge my hands into its ample pockets to find my knife, scissors, pack-thread, and old gloves, all of which you are sure to lose or mislay, if you do not keep them there; and snatching up my basket, rake, and trowel, hurry forth into my peaceful garden. Some of my young readers may think this a strange time of year to begin a discourse about flower-gardening, but we shall have plenty of matter to discuss during the dead months of winter, preparatory to the busy time of spring, and we may be pleased to find that any suggestions offered can be acted on almost immediately, or, as soon as the year commences, instead of having to wait till a whole season, perhaps, comes round.

October is a busy month in many ways. A garden must be "packed up" for its winter sleep, and laid by in neat, lady-like order. Nothing looks more deplorable than plants left straggling on the borders, with their dead leaves and stems decayed and black; sticks left in disorder, with the remains of sweet peas entangled round them, and roses and honey-suckles bearing the black, comfortless relics of their beautiful summer bloom. Every straggling leaf and stem must be cut off, and the plant neatly trimmed. Pick off all dead buds and seed pods, that are left after the floricultural harvest; dig in the old plants of mignonette and other annuals that may yet remain, when you arrange the beds, because many strong young plants will spring from self-sown seed in autumn; and, therefore, leave no means untried to acquire them. Loosen the earth with a light prong, or hand-fork, to enable the frost to enter, to kill insects, and the snow to enrich the soil. Remember "the treasures of the hail." Collect all the refuse of the garden: the dead leaves, etc., and make a heap of them in a retired nook, where they

will, in time, become a rich supply of leaf mold, so useful to potted plants. It would be better even to endure the unsightly object, than to let the contents of your wheelbarrows be thrown away. Nothing should be thrown away; all is good in its time and place; and even our flowers will help to support themselves, thus teaching another useful lesson upon the well-regulated mind. These are some of our October duties, and this enchanting season, hitherto, renders our labor light.

The first morning visit to my garden is always one of great interest. I love to ask my little charges how they do after the dewy hours of night; and there is such a coolness and sweetness in the early day, that their tints and fragrance seem increased a hundred fold. The shining drops tremble and sparkle so prettily in their tiny cups, and they seem so fully to enjoy their pure repast, that it makes me almost wish I could live upon dew drops too.

Nevertheless, I almost daily miss a well known face. My flowers are drooping and fading, even though this summer-like autumn still prevails. By nipping off the decaying blooms, I aid the declining strength of the plant, but it is only for a time. My dahlias chrysanthemums, scarlet-lychnis, and hawk-weed, are the chief ornaments of my borders now, and the first rains will spoil their beauty. What a useful, beautiful plant is the fuchsia! I have one large circular bed chiefly filled with them, and the effect is lovely. The bed is somewhat raised, in the center stands a large plant, and the others are placed around it, at distances of three or four feet. The two last winters have been so mild, that my fuchsias have not died down at all. I protected their roots well with coal-ashes, making quite a little hillock at their feet, and shaded the remainder of the plants with stakes covered with the boughs of the spruce-fir, so as to keep off the perpendicular attack of the frost. I was led to this in the first instance, by observing the evident appearances of life in my plants long after I thought they must have died down to the ashes, as usual; and by this plan I petted them through the spring frosts and chilling gusts, and had the pleasure of introducing them to the warm sun again, when all danger ceased, in the full size to which they had grown the year before. Few, perhaps, of my readers can obtain boughs of

spruce-fir, nor are they needful; any matting or other covering will do; nor can I be certain that in ordinary winters such a trial will succeed. The last two seasons have been peculiar; but it is worth while to try the experiment. My plants are now quite shrubs in size, and I hope to tell my friends in the spring how they have struggled through the difficulties of this coming winter. Be particular in covering their roots well with ashes; they will, without other protection, die down to the ground, but life will remain safely in the root; and by peeping below the ashes in the spring, you will see the little, tender shoots starting forth ready to replace the dead boughs, which must be cut away. Some ladies cut down their plants before they "ash" them up, but they had better remain; sometimes they do not die so far down as at others, and then you need not cut them off so low. I am glad to see these very graceful flowers more frequently in cottage gardens. The culture is simple, and the effect pleasing to the eye. In my fuchsia bed I interpose roses, which bloom during the infancy of their autumnal friends, thereby keeping up a succession of flowers. The lighter colored dahlias do well among them also, if your bed is large enough, or you have no rose trees there. We should try to mingle colors well and effectively in our garden, as we do in our dress. Nature certainly admits of stronger contrasts, and requires less help than we could venture to

use among our ribbons and trinkets, but still we may, with caution, be her handmaids. By very simple means we might embellish our gardens, however small or inconveniently placed. The poor might improve the appearance of every hamlet by a little attention to the arrangement of the plot of ground around their cottages, which would cost nothing, and increase their interest in home enjoyments. Every apple tree, while bearing its useful part in nature, might add to its beauty by supporting a clustering honeysuckle,—that sweet sister of the rose,—which would in return conceal the rough, ungainly arms of an old spreading tree, without at all doing it harm. Then, if the cottage walls were clothed with monthly roses, jasmine, or the sweet-scented clematis, which require little else than nailing up and pruning, while a gable end might support a pear or plum tree; how pretty, how cared for, how comfortable would it seem to the passer by. A neat ornamental cottage garden *generally* bespeaks a happy household. The outward smiles seem to spring from those within; and I feel it to be our duty,—the duty of the poor as well as of the rich,—to testify their sense of God's exceeding mercy, by using and profiting by those pure and simple pleasures which He so richly provides for us all. No pleasures are so sweet as those that flow *immediately* from His gracious and parental hand. ROSA.

Cottage Gardener for October.

From Beechy's Narrative of a Voyage to the Eastern Islands.

THE UPAS TREE.

AMONG the curiosities noticed on this excursion, may be mentioned an isolated Upas tree (*Antiaris toxicaria*). It is situated at the bend of the river, near the watering-place, and stands nearly forty feet high; its trunk is almost straight, and covered with a somewhat smooth bark, of a reddish-tan color, and its head consists of a dense mass of dark green, glossy foliage. There are numerous incisions around the base of the stem, made by the natives for the purpose of procuring the poisonous juice for tipping the arrows of their sumpitans.

Although, ominously, the Burmese have selected the deadly shade of the poison-tree

as a place of interment, and the ground beneath is crowded with tombs, yet vegetation flourishes luxuriantly around its roots, and clings to its base to such a degree, that I experienced some little difficulty in coming to the stem for the purpose of tapping it for a portion of sap. On approaching the tree, I experienced no ill effects from the effluvia—which it is asserted by Leschenault de la Tour, and others, is frequently sufficient to produce nausea, vertigo, and vomiting. The Malays, however, that accompanied us, viewed the tree with evident suspicion. In order to prove by experiment, the effect of the Upas poisoned sumpit or arrow, it was tried on a

troublesome cat near our house, but it had not the rapid effect we were led to imagine. A little while after the receipt of the wound, there was foaming at the mouth, followed by spasmodic contractions of the limbs, ending in exhaustion and frequent convulsions, which caused the animal to tumble into the river. The Upas does not then, after all, appear to be nearly so poisonous in its properties as the Manchineel (*Hippomane mancinella*) of the West Indies—the dew that falls from the leaves of which blisters the skin, and many people are reported to have died by simply sleeping under its branches. In Java, there is a plant called Tjettek, or Upas Rajjah, from the roots of which, one of the most dangerous of known vegetable poisons is prepared, acting like *nux vomica*.

This must not be compounded with the real Upas, or *Antiaris*, as it is a true *Strychnos* (the *S. tieute*) and belongs to the same genus as the Ignatius' beans of the Philippines (*S. ignatia*), and the plant (*S. toxifera*) which furnishes the basis of the Hourate poison—which the intrepid and enthusiastic Mr. Waterton brought from Guayana. The Upas, Hippo, Antojar, or Upo, is found in Java, Bali, and Celebes, as well as in Borneo; and it is a curious fact, that the wholesome and useful bread fruit tree, the delicious mulberry, nay, even the famous cow-tree of South America, which supplies the Indians with milk, and the common fig, should, with their luxuriant properties, belong to the same natural order of plants which includes the deadly Upas. *Pharm. Journal.*

POMOLOGICAL GOSSIP.

MR. EDITOR: The Buffalo Delegation were so well pleased with their visit to Cincinnati last fall, that I have felt desirous ever since, of having a little more talk on Pomology with our western friends. This pomological gossip is, to many, very interesting, and it is certainly very desirable to become better acquainted with the many varieties of fruits cultivated in different sections of our country. The fact is well established that there are but few sorts of fruit that succeed *equally* well in all parts of our widely extended country. Hence it is decidedly for the interest of individuals planting out orchards, to ascertain what varieties are adapted to their particular locations. I know of no better way to call out this desirable information than for Pomologists and fruit growers to lay these important facts before the public, through the medium of our Horticultural and Agricultural Journals.

It is well ascertained, and I believe, pretty generally conceded, that quite a large number of the more choice and prominent standard fruits, are very extensively adapted to the eastern, middle and western states. To this

there are exceptions. Quite a number of sorts that are fine and desirable on the seaboard, are quite worthless in some other places; and perhaps an equal or a larger number of sorts that thrive admirably in the rich fertile soil of the west, are not worth cultivating in the eastern states.

The Report of the Fruit Committee of the Essex Institute, of Salem, Massachusetts, for the year 1850, is now before me. This fruit committee give us the following lists of fruits which they recommend for general cultivation. I also append the remarks of the committee.

PEARS.

Madeleine—not first rate, but the earliest pear worthy of cultivation.

Bloodgood—requires a warm soil.

Dearborns' seedling—only suitable for the garden.

Rostizer, Bartlett,
Golden Beurré of Bilboa, Long green,
Flemish Beauty, Buffam,
Belle Lucrative—only suitable for the garden.

Seckel—requires a rich soil.

Louise Bonne de Jersey—particularly fine on quince for gardens.

Fulton, Beurré Bosc,
Urbaniste, Paradise d Automne,

Beurré Deil—on quince, for gardens,
Duchesse d' Angoulême—on quince, for gar-
dens.

Winter Nelis, Beurré d' Aremberg,
Lawrence.

For Cooking:

Monsieur le Cure—sometimes suitable for
the table,
Pound.

The following are of the newer sorts, not
fully tested, but which promise well:

Doyenné d' Été,	Manning's Elizabeth,
Tyson,	Plombgastel,
Beurré Sprin,	Duchesse d' Orleans,
Beurré Anjou,	Doyenné Boussock.

APPLES.

Early Harvest,	Orne's Early,
Early Sweet Bough,	Red Astrachan,
Williams' Favorite,	Porter,
Gravenstein,	Garden Royal—for
Fall Harvey,	gardens only.
Minister,	Haskell's Sweet,
Rhode Island Green-	Hubbardston's Non-
ing,	such,
Roxbury Russet,	Danvers Winter
Jonathan,	Sweet,

Baldwin.

Of the list of pears here given, nearly all, except those under the head of "promise well," have fruited in my own grounds, and as a whole, the selection is a very good one for western New York, and I doubt not, for the western States also. For this location I should add to the list the following, and perhaps some few other sorts—Stevens' Genesee, which is one of our most productive autumn pears; always large and fine, and generally of fine flavor. White Doyenné, productive and of fine flavor; requires rich, high culture, on a deep soil. Onondaga, a variety introduced but a few years since, of large size, productive, and quite equal to the Bartlett. Glout Morcean, a fine winter pear, succeeds admirably on the quince, and may be classed among our most choice sorts. To these might be added a number of other choice, productive varieties, which are very desirable in a large collection.

In the list of apples, there are only two or

three that are but little known here. The others may be classed among our most valuable kinds. The Early Harvest, and the Early Sweet Bough, are here the two best, and earliest. The Williams' Favorite and Red Astrachan, too, are very fine. Porter and Gravenstein are superior autumn apples. Hubbardston's Non-such has so far proved very fine. The Minister may be classed as "good." Rhode Island Greening, wonderfully productive, and one of our most profitable sorts. Baldwin succeeds well here; perhaps equally as well as it does in Massachusetts, or any of the eastern States. The same remarks will apply to the Roxbury Russet and Danvers Winter Sweet. To this list several others should be added for this location. For early varieties I would add the Early Strawberry and Summer Rose—the latter is a most beautiful and rich apple; should be gathered early; it is not, however, as prolific a bearer as some others. The first named is very productive and fine. American Summer Pearmain, is also a very fine rich apple. The tree is a very feeble, slow grower. For autumn, the Fall Pippin and the Fameuse or Pomme d' Neige have but few equals. The last named, requires rich culture, and then it is truly fine. It is wonderfully productive; too much so, as over-bearing produces fruit of small size. Golden Sweet and Jersey Sweet, are two valuable and productive sorts that come in soon after the Sweet Bough, or the Large Yellow Bough, as it is more properly called. In regard to winter apples, a few varieties may be added—The Esopus Spitzenburgh, is an apple of the highest excellence, and the fruit always commands a high price. It may be called productive, but not quite as much so as some other sorts. Pomme Grise, is a very rich, delicious apple; has few equals in flavor, rather too small for market. The Northern Spy succeeds well here,

and in the month of April and May, has few equals, and always commands the very highest price in the market. Many large orchards of this variety have recently been planted out. The top of the tree grows very compact, and requires thinning out; this, with a deep, rich soil, and good culture, will produce abundance of beautiful, fine fruit. The writer is planting out large orchards of the Northern Spy, Roxbury Russet and Baldwin, and he has no fears as regards their productiveness, or fine flavor. The American Golden Russet, and the English Russet, are also very valuable and productive sorts, the last named is a fine late keeper. It will also endure almost any amount of freezing without injury. The Winter Swaar is a very rich, delicious winter apple, and productive. Newtown Pippin has not succeeded as well here as in some other places; in the valley of the Maumee, it is among the most valuable and productive sorts. The fruit ranks high in flavor, perhaps equal to that of almost any other variety. [The very highest.]

Had I time and space, I might comment upon many other varieties of fruits, but this *melange* is already sufficiently extended. I desire to call out some of our western Pomologists on this subject. Let the public be informed what varieties of fruits here named, succeed well in the more southern parts of Ohio, and also which kinds are there deemed worthless or unworthy of cultivation. Will not our friend A. H. Ernst, Esq., take up this subject? Mr. E., has had considerable experience in this matter.

While at Cincinnati, I noticed several varieties of apples, in various collections, which we have deemed of little worth. Among them were the Pennock, Yellow Ingestrie, and Surprise. There is no question but that we are cultivating altogether too many varieties of fruits, and it seems very desirable to abridge the list. From year to year, many new and

desirable kinds of fruit are brought before the public; these, together with the *new humbug* sorts, make a pretty formidable list. The day has now passed by, when pomologists pride themselves in possessing the largest number of varieties of fruit. The inquiry is for more choice and select fruits.

Is there any prospect of the Proceedings of the American Pomological Congress ever coming before the public? If not, it would be at least very desirable, that a list of the fruits recommended for general culture, and also the list of "rejected fruits," should appear in the *Western Horticultural Review*.

B. HODGE.

Buffalo Nursery, N. Y., February, 1851.

THE reader will find below a communication from two valued correspondents in Kentucky, from whom, as from our older brothers, let us hope to hear frequently, since we may thus commence our planting with the benefit of their veteran experience.

To Col. SANDERS, the Editor is indebted for much valuable information, received at different times during the past twenty years, but he hopes to have that indebtedness increased by many more communications from this patriarchal pomologist, who, by the by, was the first *live* Kentuckian he ever beheld.—ED. REVIEW.

GRASS HILLS, KY., March 2, 1851.

To the Editor of the Western Horticultural Review:

SIR—Having intended for some time to send you a short paper on orchards, thinking that my remarks might be of utility to young beginners, and others without experience, I applied to Judge M. Brown, of Frankfort Ky., to aid me, knowing him to be a man of good sense, and discriminating observation, who has paid much attention to the subject. The Judge kindly sent me the inclosed paper. Being so full and satisfactory on peaches, it

leaves me nothing to say as to them: its publication at this time will be quite opportune.

Respectfully, your obedient servant,

LEWIS SANDERS.

Frankfort, Feb. 23, 1851.

DEAR SIR—I was detained longer than I anticipated at my farm, and on my return found a very ill child. I hasten to write you at the earliest moment. I have had but little opportunity of comparing my experience with that of others in the peach culture, and my remarks are based solely on my own observation.

1. I planted out my orchard in the fall of 1844. I have lost scarcely any trees; they are now in fine condition and excellent health; not injured by the worm, and in their prime; indeed the only injury which they apparently sustained was from the hard and early cold a few years ago. I planted twenty feet apart. Some in a very rich and narrow bottom near the river, the rest running back into land which had been cultivated many years and which had ceased to bring good corn. Those in the rich alluvion were too close; the others are all right. I would regard twenty feet in ordinary soil as a suitable distance. I cropped two years in corn, then put them down in oats, timothy and clover. The oat crop appeared to be injurious to them for a few months, but they soon recovered.

2. I wormed them carefully two or three times a year for the first three years—in spring, summer and fall—rubbed them with a coarse cloth and soap suds as soon as the worms were taken out, to destroy the eggs, and then gave them a strong coat of white wash from the crown of the roots for two or three feet up, to intimidate the fly, and then replaced the earth with a slight hill around the tree. The labor and time to accomplish this is greatly over estimated by those who

have not tried it; a smart hand ought to go *thoroughly* over an orchard of one thousand trees in a week or less. My orchard is now well set in timothy, and I intend so to keep it, and will encourage the grass to grow close to the trees. I *believe* the fly deposits its egg late in the evening, and that the damp grass tends to discourage it. The tree destroys itself by the over production of wood. I would therefore cultivate it kindly until it obtained a good size, and then retard its subsequent and exuberant growth, by putting down in grass. My trees planted at the same time in my garden and carefully cultivated, have all died (as I believe from exhaustion). But this is a subject we can talk on when we meet. For the last two years I have been scarcely troubled at all with the worm in my orchard.

3. I would form the head of my trees nearly as high as my chin, and shorten them in severely the first two years. This gives them great advantage in resisting storms and places the fruit so high that you can turn in your hogs as soon as the fruit begins to fall, and thereby have the decayed fruit, etc., destroyed. I think an orchard should always be planted so as to give the hogs free access at the proper time, and the branches be so high as to prevent their efforts to reach and pull down the fruit.

4. The tree is frequently injured very much the *first* year of its growth, by the worm, the fly commencing the deposit of its eggs when the plant is but a few months old; simply running the thumb and finger around the trees in the nursery several times in the season, will destroy the eggs and effectually protect the tree. If protected for the first few years until the bark becomes hard and rough, they are not liable to be seriously injured afterward, as far as I have observed.

5. In regard to varieties, the confusion of names is so great that I fear I can give you

but little aid. I have a large variety, and not many that I would like to discard. *Crawford's early and late Melacatune*, so highly praised by Kenrick and others, has with me proved a perfect failure. They are splendid yellow blush peaches but rather acid—very large, and would doubtless sell very well; but I have cultivated them for ten years and never obtained a half crop. They are too delicate for my location and are always killed by the frost. Coolidge's favorite has always rotted on the tree and has been discarded by me.

I regard the following which have been tested by me, as fully answering my expectations.

CLINGS.—Late Heath, Old Newington and Late Nowington, (received of Sinclair & Corse, Baltimore, and for sale I believe by B. Hart of this county); Breckenridge Cling, (the same I think with the Old Mixon Cling, and received of Hykes, near Louisville, through L. Young); Sweet Melacatune of Spain, (received from Sinclair & Corse, Baltimore); Baltimore Rose, (received under that name from Elliott, at Cincinnati,) is decidedly the finest cling that I am acquainted with; it follows the Breckenridge, (a local name at Louisville,) and in size and beauty is everything we could expect; it is succeeded by the Sweet Melacatune of Spain, which is also the finest cling of its season that I know—very handsome size, beautiful appearance and very productive; then comes the Grand Admirable, so called by L. Young, and exhibited by him when we were in Cincinnati. I have eight or ten trees of the same kind (received from Wm. Kenrick, Boston,) and I regard them as very valuable.

FREESTONES.—Royal Kensington, (the same I think with the Grosse Mignonn), Belle de Vitry, Walter's Early, Carpenter's Red Rareripec, Smock Free, Beer's Late Rareripec, (all received from Sinclair & Corse, Baltimore,) Old Mixon Free. These have

all proved valuable and satisfactory with me, I have nearly one hundred varieties, or rather names, and I consider the above as equal to any. You would do well to drop a line to L. Young, I sent him many varieties some years ago, and I think he has propagated largely.

Should I have it in my power to give you any other information, it will afford me pleasure so to do. After this week I shall be absent at court for several weeks.

Please send me a few cuttings of Bledsoe's seedling. It is now ripening beautifully with a fine perfume, and I wish to have a few trees grafted with it.

If peaches hit, you must meet me at my place during the summer, and I think you will find fruit from which you would like to propagate.

Excuse this hasty letter,

Very respectfully,

MASON BROWN.

LEWIS SANDERS, Esq.

THE FIRST CHERRY IN THE MAURITIUS.—

The first cherry ever grown on this island appears to have given rise to some extraordinary proceedings. A tree had been introduced and tended with great care by a planter, who watched over it with trembling anxiety during the flowering season; all the fruit, however, failed, except one cherry, which gradually ripened and came to perfection. A festival was given in celebration of the event by the delighted planter, and the governor, Sir R. Farquhar, invited to gather the unique and interesting specimen. He arrived punctual at the hour, and at the head of the assembled company, approached the tree. The cherry was gone!—a young negro, unable to resist the temptation of the rich and juicy fruit, had swallowed it. The governor appeased the planter's vexation with the good-humored remark that the will would suffice for the deed; and the company consoled themselves for the disappointment by adjourning to the breakfast table.—*Chambers' Edinburgh Journal.*

AMARYLLIS.

THE great mass of those beautiful bulbous-rooted plants, passing under the common name of "Amaryllis" among general observers, is divided in books into a number of different groups or genera; each group having something in its nature different from the rest, and consequently requiring a different management. For instance, one group grows in summer and rests in winter; another group grows in the winter and rests during the summer. Some of them flower in the spring; some in the summer; and others in the autumn. Again, some of the plants are hardy, or half-hardy, others of them require a green house, or good pit; while a third portion will not live with us without the aid of a stove or hothouse. It is, therefore, self evident that if their natural habits are to be attended to while under cultivation, and they will do no good unless they are, the various groups must be very differently heated at different times of the year. No wonder, therefore, that a gardener is much puzzled when he is asked a question, as "What is the best method of growing the amaryllis?"—and I have that question now lying before me. An answer to a question so general, would be as likely as not to lead the inquirer in the wrong direction. To be of any use it could only affect one particular group, and perhaps not more than a single plant of the amaryllis tribe. Unless, therefore, he who seeks for information is able to state to what particular group his plant or plants belong, the chances are, that if he asks for advice respecting their management, he will be informed, unintentionally, in the wrong way. In this article, therefore, I shall run over the principal divisions of the amaryllis, and give the proper treatment for each; recommending those plants that have showy flowers, and are easy to manage.

The oldest amaryllis in England is that plant which has gone under the name of the *Jacobæa Lily* for many years, and what is curious enough, until within the last few years, no one knew how it found its way into England, or from what part of the world it came. It is now known to be a native of the temperate regions of Mexico and Guatemala, or what is now called Central America, and is found to be quite hardy in England, if

planted in front of a green-house, or in dry earth anywhere, provided it is placed six inches below the surface; and you know potatoes will live out an ordinary winter at that depth. Therefore, if you have a garden, or any piece of ground, you may manage it as easily as potatoes, and very much in the same way, and in that way it will increase by offset-bulbs faster than you can find room for it. What becomes of the very old plants of it I cannot say, but I never saw a young or old one dead yet; so there is not much fear about your losing it. It will not flower in England unless it is taken up in the autumn, as soon as the frost comes, and dried like an onion; that is, letting its leaves and roots shrivel up in the drying, before they are cut off. Then you may put it in a paper bag, and hang it up in the kitchen for three months; a cooler place will not suit it near so well. In the spring you may pot it in a good kind of mold in a damp state, and it will suck in sufficient moisture, without being watered, to set itself growing, and by the time the leaves are three or four inches high, the flower-stalk will push up, and then water it freely every day. All this time it will do in the window, or greenhouse; but when the flowering is over, you should plant it out of the pot into a border, and water it occasionally in dry weather till late in the autumn, when you must take it up as before. When you have several roots or bulbs of this plant, you can pot a couple of them, at intervals of a fortnight or three weeks in the spring, to prolong their season. The flower-stalk seldom produces more than one flower, and never more than two, but the flower is large, and of a gorgeous color, dark purplish red all over, and the whole flower stands nodding down on one side of the stalk, giving it a peculiarly graceful appearance. It has never been known to seed, nor will all our skill make it breed with any other sort. I suppose it is for these unsociable qualities that they have given it such a hard Latin name in books, as *Sprekelia formosissima*.

The next amaryllis I shall name is the most common of them all, and often called the *Bella-donna Lily*; a name given to it in Italy, where it grows as well as it does at its native place—the Cape of Good Hope. In

all probability it was the first plant that was introduced to Europe from the Cape by Portuguese navigators or Dutch settlers. At any rate, it is the type of the true amaryllis family, of which there are only two or three more sorts, all from South Africa, and nearly hardy with us. The word amaryllis was the name of a beautiful woman, immortalized by Virgil, the Mantuan bard, as the *Bella-donna* of one of his earliest poems. When Linnæus undertook his great reform in the system of naming plants, he applied Virgil's name of a beautiful lady, *Amaryllis*, which was handed down from the poet's time as proverbial for loveliness, to those beautiful plants called *Bella-donna lilies* by the Italian gardeners. "It was the exquisite blending of pink and white in that flower, as in the female complexion, that suggested the common name in Italy; and to those lovely tints Linnæus referred, when he assigned to it the name of a beautiful woman." (Herbert.) How absurd, therefore, to have broken these playful associations of the great botanical philosopher, on which he first founded the genius, by associating with it either such green-eyed parrot-colored faced ladies as *Anlica*, *Catyptrata*, and *Vittata*; or with such bearded and yellow, copper-colored Indians as *Bracteata*, *Equestris*, and the whole race of *tubulosum*, which have hardly any parts in common with our beautiful *Bella-donna*.

Where the soil is suitable, the *Amaryllis Bella-donna* will live out of doors with us, and flower every autumn; but it does not like to be often disturbed, or any capricious treatment. A south aspect, under a wall or in front of a greenhouse, being all the shelter it requires. In some soils, however, it is next to impossible to flower it, and then it increases by offsets much faster than when it flowers regularly. The cause of its not flowering can only be a mere guess; therefore the best way is to take it up about the end of June, change the soil, and make a new border for it. If the *Bella-donna* has remained several years in the same place, the roots have worked down very deep; and if they got into a rich subsoil, that may have been the reason of its not flowering, for unless the roots are kept dry from the end of May to the end of August, it will either not flower, or, at best, not very freely. Perhaps the bottom soil may be too poor and dry, and in this case the plant has not nourishment sufficient to produce a

vigorous growth in the leaves, and then a liberal watering once a week will be very likely to overcome the soil. It is of little use to water bulbs in the common way, especially if they have been long in the same place. The way to get at them is this:—take a pointed stick (the handle of a hoe or rake will do) and make a half a dozen holes round each patch of leaves, and as deep as your arms can push the stick. Pour the water gently into these holes from the spout of a watering-pot, and, if you are quite satisfied that the bottom of the border is too dry, one whole watering-pot full will not be too much for every patch the first time, and half that quantity at each watering afterward, and you may continue these weekly doses till the middle of April; for if the bulbs are in active growth, and have good drainage, they will take an enormous quantity of water. It is a good maxim which says, "let well alone;" yet I would not leave the *Bella-donna* more than six years unplanted, even if it flowered every autumn; but as its roots do not die annually, as those of some bulbs do, the work of transplanting them must be very carefully performed, all the roots ought to be preserved as much as possible, and as soon as you get them up, lay the bulbs on their sides in a row, and throw some earth over the roots. It is a strange notion to suppose, as some people do, that the roots of such bulbs are not very necessary for them! It is true that they can renew their roots if they are damaged, but then it is at the expense of their store of sap, which ought to go for leaves and flowers next year. The instances of a contrary practice with tulips, hyacinths, etc., without any bad effects, is familiar enough, but the roots of these plants die naturally every year; not so, however, the roots of the amaryllis, and the older the roots are the better they will flower. I once received a parcel of amaryllis bulbs from a gardener, and though I gave him instructions about saving the roots, and the time I wished them, he took them up at the end of May, a month too soon, and cut off all their roots, and consequently, though they flowered regularly in his garden for twenty or thirty years, it took me five years to get them round. It is much easier to manage the *Bella donna lilies* in pots in a pit, as you can regulate their treatment with some certainty—but their flowers are not nearly so fine in pots; and as the flowers appear before the leaves, like the *Guernsey lily*,

many people object to them on that account, alleging that it is "uncomfortable" to see plants flower without leaves, especially in pots. Like all bulbs from hot countries, the *Bella-donna* ought to be wholly covered with the soil in a pot, as when they are at rest it is difficult to find a place sufficiently dry to suit them. The air of our climate in the driest season is altogether too moist for many bulbs; but when they are covered with a crust of dry earth, they are safe enough from its effects. Strong, rich soil, and large pots, free ventilation, a vigorous growth from December to the end of March, after that water very gradually withheld, and the pots when dry placed in the hottest end of a shelf in a greenhouse, or close pit, are the chief requisites for bringing out the *Bella-donna* as fine as pot-cultivation can do it. About the end of August, place the pot in a saucer of water for four and twenty hours, so that the whole mass of soil may become just wet, and keep it merely damp for a week or two; by that time, if all is right, the flower buds will sprout; but do not give much water till the leaves are two or three inches long, for plants without their leaves can use little water, and many bulbs perish with too much water at first.

There are half a dozen more *amaryllis* which require *exactly* the same treatment as the *Bella-donna*. They are called *Brunsvigia*, a kind of complimentary name, in honor of the noble family of Brunswick, from whom our gracious Queen is a descendant; so that it is easy enough to think of this name. Their bulbs are much larger than those of *Bella-donna*, and if they are left above ground, or half out of the soil in the pot, they never do much good. They like very strong loam, but no manure mixed with it. If the pots are well drained, as they ought to be, you can hardly give them too much water in winter. Some gardeners place them in hothouses, thinking to hurry them on; but, being of a noble race, they resent this trespass on their dignity—they must have their own way. It is true they make a very rapid growth, like all the bulbs of South Africa, in their native wilds, as they can only grow during the rainy season which in that country is not much above three months in the year, and when the rains are over they are almost baked with the drought, and we ought to imitate that dry heat as much as possible when they are at rest with us, by placing the pots where the

sun strikes hottest about the premises. There is another peculiarity belonging to them, which puzzled all the gardeners for many years. Their roots never die of themselves, and, if they meet with no accident, will penetrate down, in the course of years, beyond the influence of the annual droughts, and at that depth they have some moisture more or less, all the year round. Now, you could hardly believe that we could imitate this part of their natural condition. If we put the pots in saucers when they were dry, and give a little water now and then, we could not so regulate the supply as to prevent the soil imbibing part of it; and the soil can not be too dry, when they are at rest; many experiments failed, and hundreds of bulbs were destroyed before we overcame this difficulty, and it is the simplest thing in the world after all, merely placing the pots in deep saucers, and two inches wider all round than the pot, then filling them brim-full of sand, and by only keeping this sand moist, the bottoms of the pots are kept uniformly damp; and thus the best part of the roots are kept from drying too much, while the bulbs are as dry as our climate can make them, and the treatment is so near to their natural condition, that they flower regularly under it. In 1844, 1845, and 1846, I received an assortment of these direct from the Cape, some of them not in the best condition. After establishing them in pots, I planted them in a border in the open air, from which frost can be kept, and now most of them have so far recovered as to begin to flower. This rainy season seems to have suited them; and yet in dry seasons they do not like to be watered all over their leaves, only at the roots.

There are many kinds of bulbs from the Cape Colony, near relations to *amaryllis*, which will all do under the above treatment; and one peculiarity belonging to them is their dislike to close confinement, and yet they are fond of heat. They also require their roots to be three years old before they will flower; so that when they are once disrooted, no matter how old the bulbs may be, it will take three years to establish them again. We often see large imported bulbs of the flower a few months after their arrival; but such flowers were formed before they were disturbed in Africa, and, of course had nothing to do with our kind of cultivation; but, I believe, no one has ever seen them in flower the next

two years, or hardly in the third season, owing to their roots having been destroyed when they were taken up. Now this is the whole secret of the supposed difficulty in flowering Cape amaryllises. They are not allowed a uniform mode of treatment to enable them to establish themselves, before it is possible for them to flower; no, all kinds of experiments are tried to induce them to flower sooner, and when hot-beds, or house-culture, form part of such experiments, the remedy is worse than the disease. The only way that I can conceive artificial heat likely to be useful in such cases, is to plunge the pots in bottom-heat of 85 or 90 degrees, without any close covering over them; but as all the true amaryllis grow

only in winter, that treatment would only suit the allied sorts, which grow in summer, or have persistent leaves, that is, retaining their leaves all the year round. In the whole range of gardening, I do not know where there is a greater opening for improvement to an amateur, than in the tribe of the half-hardy bulbs from different parts of the world. A good greenhouse, one pit for such bulbs as grow in winter, and another pit for those which make their growth in summer, good peat-earth, strong loam and sand, from which different degrees of compost could be made, and a good stock of patience and perseverance, are the necessary requisites for the undertaking.—
Cottage Gardener. D. BEATON.

FOREST TREES.

I love those majestic natives of our soil. Hours have I wandered among the venerable monarchs of our primeval forest, lost in admiration of their varied beauty and grandeur. But, like their old familiars, the aboriginal proprietors of the vast wilderness which once covered this land, they are fast disappearing before the tread of the white man. A large majority view them only as a nuisance; and the woodman, as he sinks his ax into the monarch of centuries, feels as if he were doing a good work; and as the venerable trunk reels and falls before the well plied blows, marking its ruin with a crash and a roar which resounds through the forest like the "voice of many waters," he feels as if he had only removed a mere cumberer of the ground. How often, as I have witnessed the devastation of timber, in "making a clearing," has the exclamation involuntarily arisen,

"Woodman, spare that tree!"

But the woodman has little poetry in his composition when clearing up the forest. It is a matter of fact business with him, and a tree is a thing to be got rid of. In his situation perhaps he is right—but how many are there, differently situated, who are of his

opinion without his reasons. Experience tells us the number is legion: who if they do not exhibit their activity in cutting down trees, display a most "masterly inactivity" in never planting them.

Now, Sir, I hold that nothing improves a farm—a dwelling—a street, town or city, so much as ornamental trees; and the man, woman or child, who plants one, is a benefactor to mankind. If you doubt this, visit the beautiful and world renowned "CITY of ELMS," on our Atlantic border, or our own beautiful "FOREST CITY," on the banks of our noble northern lake. To what are these cities indebted for their beauty? Is it to their well laid out streets—to their public squares and promenades—to their splendid public and private buildings? Other cities have these, and yet we hear not their beauty praised. It is to the stately forest trees which adorn those streets and squares and promenades, they stand indebted; and, as a rich setting to a costly jewel, lends additional splendor to those public and private buildings. Yea, more; they make the plainer edifice, and the quiet and humble cottage, pleasant and comely to look upon.

Talk of your exotics! Where can we find any trees superior to the native productions of our own forests? No where, I boldly say. Step here with me—look at that group of Elms. Can you find their superior in any foreign growth? See that Ash, with its round and graceful head. And here is a Whitewood, covered with its beautiful tulips, and close to it is a Cucumber, or, in botanical language, a “Magnolia,” with its beautiful tulip-like blossoms, to be succeeded by those splendid red pericarps or “cucumbers.” And here is a grove of Sugar Maples—a “sugar camp”—can you show me any thing finer? But look further; here is a Basswood, or Linden, with its beautiful clusters of yellow blossoms; and there is a Catalpa, with its equally beautiful clusters; and view that group of Oaks. And then there is the Beech and Chestnut, and Black Walnut, and the sturdy Shell-bark. Hickory. Now look at those *evergreens*—our Spruce—our Pines—our Firs—our Cedars—our Hemlocks. Who that has walked through our forests with his eyes open, will even wish to go abroad for an ornamental tree? Yes, sir, we have all around us, and

at our immediate command, the *very* trees to *beautify* and *adorn* our own grounds, our road sides, our villages, towns and cities, and at the merest trifle of cost.

Let me here ask one plain question. Will we do this? We have maintained a “masterly *inactivity*” quite too long already, and it is time for a change. Let us arouse, and for a short time, at least, display a masterly *activity* in planting trees, and my word for it we shall long have reason to rejoice in the result.

I would like too see forest trees planted for ornament in all suitable places. Nothing is so grateful and pleasing to the eye of the traveler, as well as the “stay at home.” To accomplish this we must create an interest—raise an excitement—or, as politicians say, “keep it before the people.” Convince them it is for their interest, as well as pleasure, and they will do it. It is by way of “moving on the ball,” that I have thrown out these few remarks as an introduction, and may, hereafter, if deemed advisable, send you some practical hints on the propagation and management of FOREST TREES. E.

HOW TO MISMANAGE A GARDEN.

AUTUMN and winter bring many more opportunities of bad management than some folks dream of. A few more may as well be at once recommended to the attention of the learner, so that he may think them over carefully before the time to profit by them shall have passed away. When you are earthing up your celery, don't trouble yourself to do it gently and with care. Chuck the earth into the trench, a good shovel full at a time. It is sure to come right. As for the earth getting in among the leaves, why the cook can wash it out again; and if it should be rather gritty, in spite of the washing, why that is of no consequence, for you will not have the eating of it.

RASPBERRIES.—It will be necessary to put your Raspberry beds in order,—prune out

the young canes instead of the old ones; of course the bearing wood is what you want. And you may see by the remains of flowers, that the old canes are what have been bearing the crop lately gathered. If they are weakish and rather dry, it will occur to you, that they must have been exhausted by the young canes, and that if the young are removed the old will be strengthened. Good gardeners say the effect of this management is to destroy the next year's crop; but if that should be so, you will have the satisfaction of looking to the chance of a crop the year after. Another thing you may attend to; dig well about the roots of your Raspberries. Root pruning is a very fine thing, as you know by its being so much recommended by Mr. Rivers, and what is good for a pear, must

be good for a raspberry. No doubt there is a difference between them; for pear roots are coarse and woody, and naturally go down into the sub-soil, while raspberry roots are fine and fibrous, and lie near the surface. But what then? all mismanagers of any reputation, know that a root is a root, just as a hand is a hand, and a mouth a mouth.

On no account will a bad manager break up the surface of his ground in winter. He sees no advantage in letting the frost in; why then take the trouble, especially when it makes a place untidy. As for slugs and other nuisances which a hard winter may kill, he can catch them in summer time; it is good employment for a boy or two. He sees no use in having the soil broken down by frost, because it is sure to come together again in time. Instead of adopting so old a plan, he will sweep up all the leaves, and have the ground nice and level, and hard and neat—the harder the better—because it keeps the frost out. To be sure, Sandy Dinmont, who has the next garden, and who put his thermometer into the ground the year before, found that the hard ground was the coldest, and the broken ground the warmest; but a man may have enough to do if he is to mind such stuff as that.

Always roll the lawn when frozen, the grass is brittle then, and will crackle under the roller; you may see that by the marks that are left where the roller has passed. This saves mowing; never mind the grass being black. It will get green again in time, if it doesn't die. If the grass should die, it will be easy to throw down some seeds, or—to buy some more turf.

Ground work will now tax your ingenuity. People may think that the mere act of moving ground is one which is beyond the skill of any body to manage badly. Be assured that this a great mistake. Amateurs are particularly clever at making a mess of ground work, and some young and green gardeners are not far behind them. Certainly, if gardening is an amusement, the ways of such gentlemen are sufficiently ludicrous.

In the first place, buy the lowest priced tools you can find; cheap iron-mongers may be found in most places. Tools are expensive articles, and it should be an object to diminish expenses, especially such as are out of sight. As tools are to be used, not looked at, you will exercise your taste in picking

the nicest looking articles you can find. Uncommonly pretty things, light and handy looking, are turned out, for the use of amateur emigrants and gentlemen gardeners. A knife fashioned out of iron hoop looks quite as well as one of steel. A mattock of cast iron will hardly be known from one of the best temper, until you come to use it. Wheelbarrows of clean white wood, when painted, are even lighter and prettier than those of ash, and oak, and elm, ever so cleverly combined; you may buy the first for half a sovereign—you may have to pay a guinea for the last. The practical advantage of cheap tools is far too evident to require much illustration. Some soon wear out; and then you can buy more; others bend, and that makes a job for the blacksmith; most of them lose their handle after a few weeks' wear and the wheelwright may get something by re-handling them; a good many break, and there's an end of them. In this manner a clever mismanager will contrive to want a fresh outfit of tools at least every season.

Russia mats should always be looked after where they can be had for less than cost price. Plenty are in the market at half the expense which people charge who are called honest only because they deal fairly, taking a just tradesman's profit, and giving their customers what is worth the money. A bad manager has nothing to do with such folks; in Russia mats, especially, he may make a capital bargain, if he looks sharp. It is not very long since a sagacious gentleman who builds barges, obtained from a friend a hundred of these mats for £4, when the market price was £5; they were put into use in October, and in December they were wheeled to the rubbish heap. By the time the four pounds worth of mats was rotted down, the gardener had a cheap lot of manure very nearly as valuable as saw dust.

Having provided yourself with cheap implements, then look out for cheap labor. Cut your men down to the lowest farthing they will work for; perhaps you may in that way make up for any loss sustained among the tools. Don't inquire whether a man is accustomed to the ground work; every body can dig, and trench, and use a mattock, or wheel a load of earth. Should some conceited acquaintance doubt the fact, settle it by a bet; match a tailor or a shopman with a rough laborer, and you will soon see who is

the best. You may offer five to one upon the tailor—he can talk twice as well as a navy; for his tongue is as smooth as his hands.

When you have mustered your men, if they are stout laborers, teach them how to do their work; if they are of the street class, leave them to themselves. A laborer will do his work as he has been accustomed to do it, and as is most convenient to himself; the others are ten times as clever, and will hit upon new ways of their own; in fact, they will perform the work as well almost as you could do it yourself. Of course the inspirations of genius are, in manual labor, worth all the practice and experience in the world. A clever printer will make stockings much better than a Nottingham weaver. If you will but interfere with men who are accustomed to garden labor, and leave to themselves those who are strangers to it, you will, in a few days, or even hours, find your operations as satisfactory as the most zealous bad manager could desire. Suppose, for instance, you have a

square of ground to trench, an old experienced laborer will divide it into two parts, and wheel his first trench from the first half upon the corresponding end of the second half; in that way he saves wheeling, and expects to have earth enough with which to fill his last trench, when he reaches it at the end of the job. Can any thing be more like good management, or common sense? But your object is bad management; and as for common sense, why, that is not required by a man of talent; therefore, you should wheel your first trench to the other end of the ground, and work across the piece, instead of halving it, as the old laborer does. Should the land be soft, and you have cheap barrows, and the weather is wet, you will find this method a most surprising advantage. If to this you will add the scamping system, the nature of which, in trenching, any sharp country fellow can explain on the ground, better than any writer on paper, you may consider yourself perfect in this part of the art of bad management.

Gard. Chron.

REPORT OF THE TEMPERATURE FOR FIFTEEN YEARS:

EXCEPT A FEW MONTHS, WHEN I WAS FROM HOME. THESE ARE LEFT BLANK.

Hillsborough, O. Latitude about 39° 15' North. Longitude about 6° 45' West from Washington. Elevation nearly 700 feet above low water at Cincinnati.

1836 to 1843, INCLUSIVE.

MONTHS.			1836.			1837.			1838.			1839.			1840.						
	Minimum.	Maximum.	Average of the Month.		Minimum.	Maximum.	Average of the Month.		Minimum.	Maximum.	Average of the Month.		Minimum.	Maximum.	Average of the Month.		Minimum.	Maximum.	Average of the Month.		
January,	—14	54	27		4	44	25		4	60	31.8		6	58	34		—2	50	23.5		
February,	—11	54	24		—	3	54	37		—22	42	15		6	60	33.6		4	68	40.1	
March,		8	52	32		15	64	38		6	77	43		—10	73	36		15	71	44.4	
April,		22	80	49.5		23	80	42.5		24	76	49		28	80	56		24	82	62.6	
May,		35	82	62		32	85	58		30	80	51		30	83	63.5		36	83	60.2	
June,		50	82	66		44	82	61		46	86	69.5		46	89	61		44	85	67.6	
July,		52	83	69.5		56	86	70		52	92	74.5		51	90	72		50	88	73	
August,		54	82	67.3		44	85	67		54	89	72.7		48	89	70		54	84	70.3	
September,		34	86	65.5		36	81	61		34	83	62.5		30	78	59					
October,		24	70	44.5		22	72	47		26	74	45.5		28	79	57.7					
November,		10	64	35		22	66	44		9	60	35.7		2	54	35		15	63	39.6	
December,		—1	54	26.3		2	66	32.5		—	5	49	25.3		2	42	29.2		4	46	29.8
Average,				47.4				48.6				47.7				50.6					
Trees bloom.	{ Peach,	{ Cherry,	{ Apple,	April 30.	April 30.			April 24.			April 27.			April 4.							
					May 2.			1837 & '38			1838 & '39			1839 & '40							
					May 5.			29.8			31			30.9							
Average of the Winter.					1836 & '37			29.46													

REPORT OF THE TEMPERATURE FOR FIFTEEN YEARS.

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1841 to 1845, INCLUSIVE.

MONTHS.	1841.			1842.			1843.			1844.			1845.		
	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.
January,	— 49	27.9		9 59	35		4 64	35.3		— 1.5	54	23.5	18 57	36.8	
February,	1 50	28.9		4 63	34.9		5 49	24.4		10 61	34.6		8 65	37.3	
March,	1 76	36.3		23 76	50.5		1 50	26.2		14 65	41.2		13 73	44.3	
April,	2 75	48.2		30 80	56		24 78	49.4		27 82	61.8		18 83	58.4	
May,	34 34	58.5		38 77	59.2		40 76	60		37 82	63.4		36 81	60.5	
June,	52 90	72.8		42 83	66.4		40 86	67.6		48 84	69.4		51 88	70.1	
July,	55 89	73		52 88	70.5		56 89	72.5		62 86	73.4		53 89	71.6	
August,	52 90	70.7		46 82	63.8		52 80	68.3					55 87	72.8	
September,	40 87	65.6		40 86	63.3		42 84	65.6		38 82	63.8				
October,	26 73	48.3		28 73	56.6		22 66	46.1		26 68	47.8		26 68	51.6	
November,	20 62	41.1		2 68	33.6		21 59	37.8		12 68	42.2		9 65	41.3	
December,	10 58	33.8		1 61	32.3		12 55	34.4		11 52	34.1		— 12 44	23.7	
Average,		50.4			51.8			49							
Trees bloom. (Peach,	April 17.			March 21.			April 28.			April 5.			March 26.		
(Cherry,	April 20.			March 30.			May 5.			April 9.			April 11.		
(Apple,				April 2.			May 6.			April 11.					
Average of the Winter,	1840 & '41	28.9		1841 & '42	34.6		1842 & '43	30.6		1843 & '44	32.5		1844 & '45	36	

1846 to 1850, INCLUSIVE.

MONTHS.	1846.			1847.			1848.			1849.			1850.		
	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.	Minimum.	Maximum.	Average of the Month.
January,	7 56	34		— 4 62	27.9		— 4 55	36.1		5 55	28.4		— 4 54	34	
February,	1 53	30.3		5 53	34.4		13 55	34.8		— 2 62	27.7		— 2 62	33.5	
March,	17 62	42.2		11 66	37.1		2 79	39.7		25 64	43.9		14 62	38	
April,	31 82	56.7		24 77	53.2		32 78	51.9		22 81	49.2		24 74	46.4	
May,	43 86	65.5		38 80	59.3		42 80	64.6		42 79	60		36 82	56	
June,	48 83	68.9		47 85	64.7		47 88	68.7		56 88	70.8		44 86	69.9	
July,	52 90	73.5		52 89	73.9		54 82	70.7		54 88	69.4		60 90	75.7	
August,	62 89	73.5		48 82	68.5		56 84	69		56 80	64.5		54 86	71.8	
September,	47 84	68.8		40 81	62.8		36 78	59		42 79	60.5		40 82	62.7	
October,	31 74	52.4		27 73	51.1		32 68	51.8		36 66	50.8		30 74	51.8	
November,	16 66	45		16 70	45.3		22 52	36.2		22 72	43.3		24 72	44.8	
December,	18 62	37.7		0 58	31.4		19 66	39.4		— 2 51	29		11 58	31.6	
Average,		54			48.3			52			50.6			51.4	
Trees bloom. (Peach,	April 20.			April 13.			April 4.			April 7.			April 22.		
(Cherry,													April 27.		
(Apple,													May 2.		
Average of the Winter,	1845 & '46	29.3		1846 & '47	33.3		1847 & '48	34.1		1848 & '49	31.8		1849 & '50	32.2	

The thermometer hangs outside of the house, on the north side. It was examined at sunrise, or a little before, for the minimum, and at about 2 o'clock, P. M., for the maximum. The extremes during the month, are given in the first and second columns for each year. The average of the month is in the third column. The average of the years is given, except where there are blanks; and the blooming of fruit trees, as far as recorded. The average of the winters is given, and that of the summers may easily be calculated. By comparing my record with the reports of Professor RAY, of Cincinnati, I find that the temperature at Hillsborough is usually about 4° colder than at Cincinnati.

January 2d, 1851.

JOE. McD. MATHEWS.

P. S. The lowest point to which the mercury sunk, during the fifteen years, was twenty-two below zero. The highest to which it rose, ninety-two above. Both occurred in the same year, 1838.

THE CURCULIO.

MUCH as has been said and written, we still know comparatively little about remedies against the destructive attacks of this insect. Yet, I do not consider the time spent, or paper used, as thrown away. From out of the mass we may glean something useful, and, profiting by the experience of others, we may yet, as in days past, enjoy those most delicious fruits, the plum, nectarine, etc. For, unless we find some preventive, we may well say, "Farewell, Plum! a long farewell to all thy sweetness!"

I will state a few facts which may help a little. Last summer I saw but two trees of our choice plums with any ripe fruit. They were loaded, and both were standing in similar situations, though in villages some twenty-five miles apart, viz.: in the front door-yard between the house and street—say ten to fifteen feet distant from each, and within a few feet of the walks leading from the front door to the street. May not the constant passing and repassing have frightened away the depredators, and thus saved the fruit. Taking a hint from this, I have removed several plums and a nectarine (that set a fine quantity of fruit last year, but which, alas! the fell destroyers did not permit us to enjoy) into my door-yard, and close to the walls around my house. Some future day I hope to report favorably of my experiment.

A plum fancier of my acquaintance, who tells me he has had good success in raising choice plums, planted his trees in the door-yard by his house, along his walks, and near the street; in situations where there was more or less passing near the trees daily. Another friend, from whose trees I have often plucked ripe plums, says that a few years ago he made a pig yard of a small orchard where his plum trees stand, and that since then he has had plums. But his trees stand not far from his

house—near his granary and tool house, and near the walks to his barn and the road. Shall we not attribute his success to the constant passing near his trees, instead of the lingering influence of the piggery several years after it has ceased. Turning hogs into the plum orchard may be effective while it is in operation, but I am doubtful of its prospective influence. May not the good effects be produced by the "noise and confusion" of the pigs among the trees, rather than by any destruction of larva in the fallen plums.

Mr. Longworth says that his plum trees, set in a wide brick pavement round the back part of his house, have escaped the attacks of the curculio. Now, is there not a constant passing on this pavement, near and under these trees, and is it not owing to this as much, if not more than to his pavement, that he has fruit?

Since writing the above, I have read the article in your February Number, page 238. The case there stated confirms my theory, that constant movement among and near the trees, will frighten or keep away the insects, and thus save the fruit. And I have very little faith that any other remedy, I have yet heard of, will. As spring planting will soon commence, I would advise those who wish to raise plums, etc. to plant their trees in locations of the kind I have named. They may thus succeed. In any other way it is very doubtful. J. M. E.

Canfield, February 1851.

SPRINGDALE, NEAR LOUISVILLE, }
March 10th, 1851. }

H. Paddleford, Esq., St. Louis, Mo.

DEAR SIR:—I have determined to answer through the press your interrogatories concerning my last year's experiments with lime, because, in this way, the same remarks will

serve as a response to other inquirers who have addressed me on the same subject, and who take a lively interest in pomology.

In the article to which you refer, as contained in a number of last year's volume of the *Horticulturist*, it will be seen that I have spoken of lime as a specific highly deserving of further trial, rather than as an infallible remedy for the ravages of the Curculio. It is true, that for the years 1848 and 1849 its efficacy seemed undoubted, but a train of favorable conditions in those seasons may have existed during the application of the liming, which, acting in concert therewith, may have lessened the difficulty of protection, whilst in other years, the absence of those favorable conditions will increase the work of preservation beyond the power of any agency which lime can exert. Repeated experiments are needed to settle the exact value of this application.

After the use of it for three consecutive seasons, I verily believe in the virtue of lime to protect the plum, apricot and nectarine from the assaults of the Curculio, from the time the fruits are large enough to be pierced, until they are six weeks old, and that such protection will, in many seasons, insure the maturity of the crops; but last year's experience has taught us that this short exemption is not always perfect security, whilst no attempted experiment enables one to say what effect a continuation of the liming beyond six weeks would exert in such a case. But, notwithstanding all the difficulties of last season, lime-treated apricots ripened well, as did a large portion of the plum crop, and some nectarines. Indeed, so obvious was the effect of lime on these latter fruits, that, at the close of the liming season, when every fruit was sound and perfect on the dusted trees, certain other nectarine trees, left to themselves, had cast their fruit upon the ground, or they remained

on the branches, shriveled and dry, as we sometimes see them in winter.

From the tenor of your letter, I feel constrained to say that the theory of using lime for the annoyance of insects is not a new one, but is to be found in the books, and especially in London. It is only in the mode of application that my practice has any claim to originality. If, however, I am to be held responsible for the paternity of even this slight innovation, I must then be allowed to state that the use of lime-water is entirely inadmissible, save where one is curious to mature a few individual fruits, too scattering to be dusted, and is willing to apply the wash with a brush. Gravity and the affinity of particles of water for each other, make it impossible to cover the glass-like surface of the young fruits by syringing with lime-water; but after the fruits and leaves have been profusely syringed with pure water, and the powder thrown upward through the branches, until the whole is enveloped in a cloud, the fruits will become covered on all sides.

At this point a question springs up as to how far this liming may extend without exerting an injurious influence upon the general thrift and health of the tree. Without any attempt to settle a question at once both difficult and new, I think it may be said that my individual practice tends to sustain a belief that so much lime as would be required to dust the trees every five or eight days during May and early June will, if administered, prove beneficial rather than hurtful, as is indicated by the following experiments:

Within a few years, the *Chermes pyri* (of Köllar) has made its appearance in my pear orchard, and in such numbers that on some trees, the young branches seemed as filthy and black as if coated with lamp black.

Several such trees during the last season were well syringed and afterward dusted with lime until the whole system of leaves and

branches was whitened; when the lime, thrown upon this black excrementitious matter which had been moistened in syringing, united therewith, incrusting both leaves and branches. This incrustation afterward scaling off under the action of wind and rain, removed from the surface of the leaves and branches all impurities, just as soap or lime is known to cleanse the stem. Easter Beurré and White Doyenné pear trees twice treated with lime in this manner during the last season, acquired thereby the usual glossy green hue upon their leaves, and, what is more, the insects being destroyed, and the trees relieved from this exhausting drain of their fluids of circulation, many branches made new and vigorous growth.

I have also applied lime with marked success for the destruction of the *scale insect* upon the orange tribe—generally, however, resorting to its use in the fall or winter when the plants were at rest. But, in the summer of 1850, an orange tree, growing in the open air, was assailed by cocci in such numbers, that the branches and leaves were literally covered.

After syringing this tree well, and taking hold of the branches with one hand, lime from a dredging box was so applied with the other as to envelope entirely, stem, branches, and leaves; making the whole resemble more a tree in plaster, cast in "*Alto Relievo*," than the appearance of a living plant. After a short time, buds burst forth from the surface, and the whole white mass was covered with green branches long before the lime incrustations enveloping the leaves had burst and fallen. When however the leaves were set free, they seemed to have lost nothing of due vigor or a proper color. Indeed, in the plum crop itself, so perfectly free from gum are the leaves and fruits upon some trees successfully treated with this application, that I am much inclined to consider their peculiar exemption, an effect which has in some degree a corres-

ponding connection with lime as a cause. Exactly how the result is brought about does not appear, and, among other speculations explanatory of the *modus operandi*, I have indulged in the following, as at least plausible, if not true: First, lime thus applied removes all impurities from the surface of fruits and leaves, thus securing a free and healthful perspiration. Again, lime in the state of an impalpable powder, (and it is unfit for use when in throwing it against the leaves the slightest rattling is heard), almost floats in the air—being many times lighter than the unslaked mass, so that the white envelope enclosing the leaves and fruits really is what it seems to be when examined by the microscope, a white covering of open work absorbing by virtue of its color, all the luminous rays of the sunbeams, and transmitting in subdued intensity rather than excluding them; whilst the same white color to some extent screens the whole from the scorching effects of an intemperate noon-day sun, by reflecting instead of absorbing the thermic ray of the same sunbeam, just as it is supposed that in some locations pressed glass, by subduing the intensity of light and heat, promotes the health of the vine. Hoping to hear a good account from your rather extensive orchard of plums,

I remain, very respectfully, yours,

L. YOUNG.

Louisville Journal.

THE KING OF THE POTATOES.—We received on Saturday afternoon, by the Georgia, the most remarkable specimen of the potato tribe which has ever been seen in this city. It was raised by Mr. Henry Fuller, on his farm, near Portland, Oregon, and transmitted to us for presentation to the American Institute in this city. After the voyage of 7,000 miles, it is as fresh and sound as if just dug from the earth. The circumference of this monster potato is $23\frac{1}{2}$ inches, and its weight $3\frac{1}{2}$ pounds.—*New York Tribune.*

From the Journal Pharm., London.

MITCHAM: LAVENDER.

MORE than two thousand years ago the physicians of Greece were supplied with herbs, of which their *Materia Medica* chiefly consisted, by a class of persons called (*rhizotomi* or *root-cutters*), who occupied themselves with the collection and sale of roots and herbs. They are mentioned by Theophrastus, in connection with the (*pharmacopola* or *pharmacopolists*.) Most of them were illiterate and superstitious, and ascribed magical virtues to the roots and herbs which they collected.

Among the Romans these cullers of simples were termed *herbarii* (*herbarists*.) and, if we are to believe Pliny, they were a sad set of knaves.

At the present day, and in our country, the *rhizotomi* of the Greeks and the *herbarii* of the Romans are represented by a class of persons called *simples*, who go about the country collecting those medicinal herbs which grow wild, and the demand for which is insufficient to induce the dealers to cultivate them. The plants thus collected are sold chiefly to the herbalists, by whom the profession and public are supplied.

But those medicinal plants for which there is a sufficient demand, and which can be grown in this country, are cultivated in physic gardens, or physic grounds, by persons called *physic gardeners* or *herb growers*.

Although the cultivation of medicinal plants is carried on in various parts of England, yet more land is employed in this way in Surrey than in any other county; and by far the greatest part of our physic grounds lie in the parish of Mitcham, and its neighborhood, about nine miles from London. The soil of this place is a rich black mold.

The cultivation of medicinal plants at Mitcham, commenced about a century ago. Lyson, who wrote in 1796, says, that forty years before his time there was only a few acres employed in the cultivation of medicinal herbs in this parish; whereas, at the time he wrote, about two hundred and fifty acres (of which one hundred acres were devoted to the cultivation of peppermint) were occupied by *physic gardeners*.

At the present time more than eight hundred acres are devoted to the cultivation of

medicinal herbs, at Mitcham, Merton and Carshalton.

About 1768 or 1769, Mr. Potter began the cultivation of physic plants at Mitcham. He was succeeded by his relative, Mr. James Moore, who furnished Mr. Malcolm with the information contained in his work relating to the medicinal plants cultivated at Mitcham.

A considerable number of medicinal plants are cultivated there. Among the most important of these, may be mentioned *aconite chamomiles*, *belladonna elotarium*, *liquorice*, *henbane*, *lavender*, *spearmint*, *peppermint*, *roses*, *poppies*, *savine*, *violets*, *angelica*, *stinking orache*, *carraway*, *foxglove*, *lovage*, *elecampane*, *marshmallow*, and *hemlock*.

The principal part of the growers cultivate only peppermint and lavender, and some a few chamomiles. Mr. Arthur grows a rather larger number of plants than any other.

We propose occasionally to notice a few of the more interesting of medicinal herbs cultivated at Mitcham, beginning with chamomiles and lavender.

One species of lavender is only cultivated at Mitcham, namely—common or garden lavender—the *Lavendula vera*, De Cand. The spike lavender, *Lavendula spica*, De Cand, is not cultivated there. Lavender is cultivated by dividing the roots, each of which forms the rudiments of three or four new plants. These are planted in rows about eighteen inches apart, with the same interval between the plants. The second year, each alternate plant is removed to leave room for those which remain. It is common to renew the plantation after the second year; but Mr. Arthur, who has given much attention to that subject at Mitcham, has succeeded in preserving the same plantation during a period of five or six years.

Lavender is liable to a disease when too thickly planted. This occurs chiefly in the middle of the plantation, and appears to result from the aroma of the flowers, which in excess has a poisonous influence on the plants. By thinning the plantation, and insuring a free current of air, this influence is prevented or retarded. The disease is rarely if ever met with in gardens, where single plants are cultivated.

Lavender, it is found, does not require a very rich soil.

A good deal of oil of lavender is drawn at Mitcham. The capacity of the stills varies from seven hundred to one thousand gallons. The lavender packed in bundles called mats (about one cwt. each) is carried to the still house. A one thousand gallon still holds from twenty to twenty-four mats of lavender.

The mat or covering of the bundles, is not put into the still with the herbs.

The flowers are put into the still with the stalks as cut from the ground. It takes about two hours to get the steam up; then the finest oil is drawn for two and a half hours—that which comes afterward is second or third quality. The oil from the stalk is not so volatile as the other, and comes last.

DOUBLE BEARING STRAWBERRY.

THE French have obtained what they call a double bearing Elton Strawberry, concerning which we find the following account—

“Considerable interest has been lately excited among gardeners with respect to a new strawberry, discovered by M. Cremont, in the neighborhood of Paris—and which, in addition to the other qualities which distinguish it from the form to which it belongs, possesses the property of bearing twice a year. It was discovered by M. Cremont in a bed of seedling Elton strawberries, in the year 1847. The large quantity, beauty, and excellent quality of the fruit of this variety, induced the National Horticultural Society, to which it had been sent for inspection, to name a committee for the purpose of examining the plant with greater attention, and of ascertaining whether the advantages attributed to it by M. Cremont, had or had not any real existence.

“The committee, consisting of Messrs. Chereau, Angrand, Jamin, Barbat, Milleret, and Andry, accordingly proceeded to M. Cremont's garden, on the 4th of April last, and after seeing nearly eight hundred plants in pots, some in a pine stove, others in the open ground under hand glasses, unanimously declared that M. Cremont's variety ought, for its early ripeness, beauty, and excellence, to be placed at the head of American strawberries. The committee, at that time, having no opportunity of confirming its double bearing quality, re-visited M. Cremont's garden early in the following July, when they found the strawberry still in full fructification. Several plants which had in April produced an abundant crop of fruit in the pine stove had been placed out in borders, that their runners might

be developed. Not only were these plants covered with fine ripe fruit and numerous flowers, but many of their early runners were bearing, and showed by their flowers and buds that they would do so for some time to come.

The committee reported favorably of the strawberry, and thought its discovery important enough to merit a special medal, which they have recommended to be awarded to M. Cremont. In order, however, that all doubt may be removed as to the double bearing property of this variety of the Elton strawberry, two or three years of observation and experiment are still required. Those who wish to examine this subject for themselves, can obtain plants from M. Cremont, at Sarcellas, in the department of Seine et Oise—or more easily from M. Courtais Gerard, seed merchant, thirty-four, Quai de la Megisserie, Paris.”

Now, the acquisition of a strawberry of this kind, is in itself worthy of notice; but what we more particularly desire to draw attention to, is the manner in which our neighbors set about ascertaining whether a new fruit really deserves recommendation. The specimens, when exhibited, having attracted attention, what was done?—a medal, or warranty of excellence—for it may be so called—immediately given? Not at all; a committee is appointed to visit the strawberry ground, and verify the statements of the grower. The committee go to the ground, not once, but twice, and then again report in favor of the grower. Nevertheless, French scruples are not satisfied, and it is declared

that two or three years of observation and experiment are required to settle the true value of this fruit. What the committee do after all, amounts to a recommendation, not a declaration, in favor of the grower.

Is nothing of this sort practicable in Great Britain? Can not we find some guard against the impositions which are daily practiced under the name of novelty?

We suspect that the countenances of some

of our ingenious brethren would undergo rather considerable change, if their seedlings, and inventions, and new things, had to pass through such an ordeal.

Circumstances and social habits would render some modification of the French committee's system necessary; but an approach might be made to it near enough to answer the more essential purposes.

Gard. Chron.

DR. LINDLEY.

GRAPE CULTURE AND FARMING IN FRANCE.

DURING our stay in the vicinity of Sens, we had ample opportunities afforded us for introducing ourselves among the laboring classes of the citizens, and observing their habits, mode of living, and facilities for farming. Many portions of France, as most of your readers may know, are famous for the cultivation of the grape. It is during the month of October that the grapes are gathered from the vine, and converted into wine. During this season, you see, generally, every member of the family who is able to labor, engaged in the vineyards—father and sons, mother and daughters—all hands, large and small, who are able to clip the clusters from the vine or carry a basket of them from the vineyard to the wine-press. To those who are unacquainted with the process of wine-making, a few words in this regard may not be uninteresting. The grapes are first gathered into a species of long, triangular-shaped baskets, which are fastened upon the shoulders by means of two leather straps, and thus conveyed to a place of deposit in the vicinity of the vineyard. Here they are emptied into large tubs, and reduced to a soft consistence by means of a wooden pestle; after which the barrel is securely headed up, and left untouched for eight or ten days. During this period fermentation takes place; after which the whole mass, as contained in the barrels, is emptied upon a large platform, having a large groove in its circumference, and the wine expressed by means of machinery not very unlike that employed in the production of cider from the apple. This is the process for making the ordinary red wines

or claret. In the process for making the white wines, on the contrary, the grapes, after being reduced as already stated, are pressed immediately, and the wine, in this nascent state, is put into barrels, and left accessible to the air till fermentation takes place, during which process every thing in the shape of foreign matter is thrown off, and the wine remains in its pure state.

As for farming in general, in France, the lands, so far as my observations extend, are usually in a high state of cultivation, and still the French can not be called good farmers; for they have a very limited variety of farming implements, and these are generally of a very ordinary description; and, indeed, their facilities for farming of every kind, as well as their skill, are greatly inferior to what they are both in England and the United States. But the lands are mostly divided up into small patrimonies, and consequently a great amount of labor is expended upon a very small spot of ground, which accounts for the apparent contradiction in the actual state of agriculture, as contrasted with the limited facilities for farming. As just intimated, the farms are generally very small, often not much larger than a farmer in Kentucky would inclose in his orchard and gardens; but this circumstance, although it impedes, in many respects, the progress of improvement in the farming interests, is nevertheless the means of a more general diffusion of the common comforts and necessities of life among the laboring classes in France than could otherwise exist.—*Correspondence of the Louisville Presbyterian Herald.*

B E E S .

WHEN we take up any old book upon the subject of bees, we must see at once the very little that was understood concerning the natural history of this most industrious of all of God's creatures.

This ignorance is the more extraordinary when we consider how many scientific persons have written about the honey-bee, and that the attention of mankind has been drawn to the subject, by bees submitting themselves to be hived, and placed in our gardens under our immediate inspection. The first writer who speaks of the natural history of the bee is the famous historian, Xenophon. He states that there is a monarch in each hive. Aristomachus, a native of Asia Minor, spent sixty years in the study of bees; and Philissus of Thrace passed his life in the woods for the same purpose. Melissus, king of Crete, is said to have invented and taught the use of bee-hives. Aristotle and Pliny devoted some of their thoughts and writings to enlighten mankind in the natural history of the bee. The great Mantuan poet embodied in his Fourth Georgic the knowledge of bees in his time; but it would be as absurd to learn such knowledge of bees from his poems, as it would be to learn political economy (as many do) from "Goldsmith's Deserted Village."

Dr. Charles Butler, who lived in the time of Charles I., was the first person who began to dispel past ignorance on this subject. He first taught that the sovereign of the hive is a female; that bees prior to swarming send out scouts to find a new habitation; that in each journey from the hives, bees attend to only one species of flowers in collecting farina; that the farina is collected only to feed the larvæ (grubs,) and that it is not wax, for that when bees make most wax they gather no farina; that old stalls which are full of combs carry more of this matter than swarms, and yet have no more wax at the end of the year than at the beginning; that real wax is to be found in white scales at the bottom of the hive, the scales falling from the bees in working the combs, and that when melted together, no one could doubt about its being wax. He also taught that the *Lycoperdon bovista* would stupify bees without destroying them.

John Thorley, who lived in the time of

Queen Ann, made a further discovery as to wax, which he relates in the following words: "Viewing a hive of bees busy at labor, I observed one bee among the rest, of an unusual appearance, upon which I seized her directly; and with a very sensible pleasure I found within the plaits of this bee no less than six pieces of solid wax, perfectly transparent, three upon one side and three upon the other, appearing to the eye equal in bulk and gravity." Thorley introduced side-hives, and the manner of taking honey described in the "Conservative Bee-keeper." He held that bees would die if they had only access to farina, and that they do not eat it under any circumstances.

It is curious to remark, that about two hundred years after the discovery of Butler, and one hundred years after Thorley's, that an author, in the year 1821, (Arthur Aikin) should be so ignorant, or so obstinate, as to state in his book, that "wax is made by bees from the dust within the anther of flowers," and "that larvæ are fed with the purest honey;" when Thorley had proved that wax is concentered under the scales of the working bees, and Butler that the farina is only used to feed larvæ. Buffon was in the same mistake until his death.

Joseph Warder, a physician, in the early part of last century, taught that drones were males, and the workers females. He recommended ventilating hives when you are desirous that bees should not swarm. The following are the names of other persons who studied the subject last century: Reaumer, Riem, Schirach, Hunter, Knight and Bonner, but, with two exceptions, their investigations were not attended with any great success, though they were strictly men of science. The two first examined the ovary of the queen with microscopic glasses, and found an immense number of eggs. Schirach discovered that bees had the power to convert a young grub of a working bee kind into a queen. Mr. Debrau, of Cambridge, lays claim to this discovery in the "Philosophical Transactions of 1777." Riem discovered prolific workers. Hunter established the fact that bees consume more honey in frosty than in open weather. Arthur Dobbs and Knight, in the work just mentioned, claim as discoveries, what Butler

had established many years before. The same may be said of Bonner.

Having now summed up all that was done by a host of learned men by investigating the natural history of the bee, amounting in the whole to a few facts, I now come to speak of Huber, a native of Geneva, who has done more to elucidate our subject than all his great predecessors.

If Butler first pointed out that wax and farina were quite distinct substances, and Thorley found wax under the scales of working bees, it was left to Huber to give a full explanation. If Schirach and Debray discovered that bees have the power to make a working bee maggot into a queen, they thought that it was the only way the God of Nature had provided for the formation of a queen, it was left to Huber to render the experiment complete. If Riem discovered fertile workers, Huber showed the cause of them, namely, their having been nursed near royal cells, and having been fed upon royal jelly. If naturalists knew that drones were destroyed, or driven away in the autumn, it was Huber who discovered that they were stung to death by the working bees at the bottom of the hive, and there only.

Francis Huber was born at Geneva, on the 2nd of July, 1750, and inherited a taste for natural history from his father. By the writings of Bonnet, and by an intimacy with him, his attention was turned to the subject of bees. Most unfortunately, he lost his sight, but had an assistant in Francis Berens, quite qualified for the task of carrying into effect the suggestions of his employer; and in Peter Huber, his son, he had a coadjutor in every way worthy of such a father, and who afterwards became the discoverer of the natural history of the ant. The elder Huber had married Maria Aimee Lullen, the daughter of a Swiss magistrate, who warmly entered into all his views, and assisted in his experiments, as did also his daughter Jurine; by her skill in anatomy, she has forever set at rest all disputes as to the sex of the working bee. She died very young, or she would probably have added more facts to our knowledge of bees.

The discoveries of Huber are most splendid, and his little work ought to be in the hands of every lover of natural history. Huber lived to a good old age, and died on the 22d day of December, 1831, aged eighty-one; but

his name will exist forever in the minds of all who love to study the works of the great Creator. After all Huber's discoveries, there are still some facts which want elucidation. The age to which bees live is still unknown; and whether the honey which bees collect from flowers undergoes change in the honey-bag of the bee, or is deposited in the exact state in which it is found, is also involved in mystery.—*Cottage Gardener.*

From the *Genessee Farmer.*
Spring Management.

THE months of March and April are a critical period for bees. Many families perish from famine during these two months. Beekeepers should examine their hives early and often, and such as are apparently without honey, should be fed. You should remove all families liable to suffer from famine, to your cellar, if a *dry one*, if not, to any room in the house, or out-house, that can be made dark. All light must be excluded. Here you must set the hives *bottom upwards*. The next point is to give the food. If you have any honey in the comb, lay the pieces directly upon the combs within the hives, and as near to the bees as possible; then rap upon the sides of the hives, and the bees will ascend and remove the honey to the centers of their combs, to be consumed at their leisure. If you feed liquid honey, you should heat it enough to run freely; then lay a piece of empty comb, as nearly horizontally as may be, over or near the bees; and to do this, you may have to cut off the tips of combs in hives but partially filled, or place a strip of wood across the interior, to serve as a support to one side of the comb. When adjusted, take your warm honey in a small pitcher, and fill the cells of the upper surface. The bees will remove this honey as before mentioned. When no honey is to be had, (West India honey is as good as any,) you may make a *syrup* of sugar, by adding about a half pint of water to three pounds of sugar, then heat it till it boils. After it cools, take off the scum, and it is ready for use. Hives that are full of combs, require a portion to be cut out, sufficient to insert a piece of comb horizontally, as before stated. The hives may be covered with a cloth, or a wooden cover, always giving sufficient room for the admission of air, without allowing the bees to escape.

The feeding should be done at evening, since the bees will be much more quiet at this period, while removing the honey, than in the day time, even if it be a perfectly dark place where the bees are kept. They are apt to endeavor to escape when aroused in the day time, especially if any light enter the hive. The period to remove the bees to a dark location, for the purpose of being fed, is at any time from December to April. As soon as pleasant weather approaches in April, place them where they are to stand for the season. I now refer to a northern latitude, and especially to Western New York, where we have but little warm, sunny weather in the winter season. In sections where the skies are more clear, and especially further south, feeding may be effected, through the aid of the sun, in the supers or chambers of hives, as fully set forth in the *Bee-Keeper's Manual*. A little salt should be put in the food of bees in the spring. Don't be at all uneasy in regard to keeping your bees confined several months, when it is necessary to do so. It is better that they should be allowed to void their feces, but it will not seriously injure them to be shut up five months.

T. B. MINER.

DRYING SPECIMENS OF FLOWERS.

As the season for collecting plants is approaching, may I be permitted to give the particulars of the process I have adopted in drying specimens for the Hortus Siccus, especially the more delicate and succulent ones, for which I have found it peculiarly adapted, as it combines the greatest equality of pressure, with dispatch in drying. My method is as follows: The apparatus required is very simple, consisting of a few canvas or linen bags, of such a size that, when laid flat, they will rather more than cover a sheet of demy paper, a quantity of clean sand, an old saucepan, or other convenient vessel, to heat it in, and a few quires of blotting paper. Having provided these, first put a sufficient quantity of sand in the saucepan, over the fire, and, while this is heating, take a quire of blotting paper, on which arrange the plants, covering them with two or three sheets of blotting paper. When the sand is sufficiently heated, and uniformly so, (which may be promoted by stirring it with a stick,) pour into one of the bags enough to fill it to one-third. The

mouth of the bag being closed, by tying or folding back, it is then to be laid carefully over the plants arranged between the paper, and the sand contained in it to be spread out by the hand, and pressed with a board, so as to form a flat uniform surface.

This process may be repeated, several layers of paper, plants, and sand-bags being laid on one another. If this is done, no extra weight will be required—the smallest and most delicate plants being placed in the uppermost layers; but if the subject be large and thick, a board and weight will be generally necessary.

Unless they are very thick and succulent, in which case they may require a second application of hot sand, the plants will generally be found quite dry within twenty-four hours, and often much sooner. This is one advantage, as, by this rapid desiccation, the color is preserved in the greatest perfection—i. e., if the temperature be well regulated. The second, and perhaps of more importance as regards the Botanical value of the specimen, is, that the sand, by adapting itself to the inequalities of the object under pressure, prevents any crushing of the stems, receptacles, etc., while the parts of the leaves in juxtaposition with the hard, thick stem, which by the ordinary method, escape any pressure, and consequently shrivel up, are all equally flattened.

I am not aware that this method has been adopted at all generally, never having seen it made use of elsewhere, nor mentioned among the numerous published instructions for preserving plants.

This is my motive for this communication, which I hope may in some instances be found useful; if it should not, I beg pardon for thus trespassing on your time and attention.

Pharm. Journal, London.

New Varieties of Potatoes.

At the Fair of the American Institute, we noticed that several specimens of potatoes of new varieties exhibited by Mr. J. P. Swain, of East Chester, which seemed to attract much attention, were the "South American," planted one year on the plains of Bogota, and three years in Westchester; the "Peruvian," the seed taken from the forest in Peru, and planted three years in Westchester.—These, and another variety, were the size of hen's eggs, smooth skins and fine texture.

They were raised in the field with diseased potatoes, and exhibited no signs of decay. They are said to be of excellent flavor, and good boilers. The experiments made by Mr. S. will be of vast advantage, if he shall succeed in producing a potatoe of vigorous growth with a good healthy constitution. A fourth variety, also from the farm of Mr. S. was the "Mexican." The first year of planting no tubers could be discovered; the second year vines six feet high were produced, with tubers about the size of a pea; the third (this) year, the largest were about the size of a pigeon's egg. The seed lay in the ground all winter, without being injured by the frost.—*New York Scientific American.*

◆◆◆◆◆
From the Southern Farmer and Planter.
Cherokee Rose Hedge.

A great many shrubs and trees have been used for the formation of hedges, but none is better adapted to this purpose than the Cherokee or Carolina Rose. This plant is of a hardy nature, rapid growth, easy of cultivation, and makes a beautiful, durable, compact, and *perfectly impenetrable* hedge; and, so far as has been ascertained, is not subject to any disease nor the depredations of any devourer. This rose is propagated from roots, seed, layers or cuttings, and will grow on any land, but flourishes best in a deep, rich, loamy situation. The fall and winter months are the proper season for the formation of the hedge. If it is proposed to enclose a plantation with a hedge, remove the fence a few feet, in order that the proposed hedge course may occupy the space upon which the old fence stood, as it is usually more mellow and fertile than the adjoining soil. Clear the ground of briars, roots, stones, and every thing that might tend to retard the speedy and successful growth of the cuttings. Break up the ground for the proposed hedge deeply, pulverize as finely as possible, and throw up the dirt in the same manner as if preparing a cotton bed. Having procured a sufficient quantity of the rose, cut it into pieces of 16 or 18 inches in length.—Then insert the cuttings about 8 or 10 inches deep in the bed, pressing the earth firmly about every one. Plant the cuttings in two rows, about one foot apart in the row, and the rows two feet distant. Having planted your hedge course, let it remain till the grass

and weeds make their appearance in the spring or summer. Then scrape between the rows and cuttings in the same manner as if you were working cotton. Continue to keep the hedge course clear of weeds during the first and second summer after it is planted. Be careful in cleaning out the weeds, that the young cuttings are not injured, or misplaced by the hoe, as the least jar will frequently cause them to droop and die. Nothing now remains to be done but to keep the hedge course clear of weeds, and as the cuttings advance in length and height, interweave the branches together. This must be done by means of a long pronged or forked stick, as the briars cannot be handled with ease or safety, on account of the long, strong and sharp thorns with which this rose abounds. In three years from the insertion of the cuttings in the hedge course, if the soil has been well prepared and well worked, a hedge can be formed, which, by its impenetrability, will repel the attacks of any animal, and by its beauty soften a little the desolate and gloomy appearance of our winters.

M. HENRY.

[This plant is mentioned on page ; it is too tender for our latitude.—Ed.]

◆◆◆◆◆
The Window Gardens of London.

EITHER amateur gardeners are become more skillful, the London atmosphere much clearer, or the speculations of by-gone days were fallacious; for during a recent stroll from Belgravia to Temple-bar, the appearance of the numerous balcony gardens, (and they are becoming quite a feature in the street scenery of the great metropolis,) was directly opposite to what one would infer, if he had lived in the country all his life, and formed his opinions from what he had read of the soot-loaded air of London. The plants for the greater part were in luxuriant health. Scarlet geraniums, with leaves of a tint that would not have disgraced the window-sill of a villa at Hampstead, and mingled with them were trusses of flowers in every way beautiful; and I could not admire them, without mentally ruminating upon the amount of gratification which their owners must derive from the possession of such objects in localities where there is so little to remind one of the green fields and flowery banks, of sunny skies and summer rambles.

Foremost as a window plant in the closer

streets is the trailing *Lysimachia nummularia*, (Money Wort) of our English meadows, and a very pretty and graceful adjunct to a London, or indeed, any balcony, it certainly is. In Essex street, leading from the strand, is a window garden of more than ordinary magnitude. *Lysimachias*, *Geraniums*, *Chrysanthemums*, and numerous other plants, were rambling with a luxuriance quite incompatible with the ordinary ideas of a floral display in London; and in almost every street, however apparently unsuited for gardening operations, windows full of healthy plants are sure to gratify the eye of the pedestrian.

There is a circumstance upon which I must beg to become critical. I know I touch upon a delicate point, yet I feel assured that those numerous window gardeners who read the *Gardeners' Chronicle*, will take the little bit of criticism in the same spirit that it is given. I allude to the red pots, which offend the eye

at every turn, and materially detract from the otherwise pleasurable sensations conveyed by the healthy plants occupying them. Not satisfied with the self-color of the pots, (in itself quite bad enough) their possessors anoint them with some pigment of a fiery-red color, quite distressing to look at. I am somewhat puzzled to account for a seeming anomaly in this respect, which I observed at a mansion, I think, in the Belgrave square. At the first floor windows were some plants rejoicing in all the pride of newly colored red pots, and in that immediately above them, some neatly executed vases, in imitation of stone, were the receptacles of plants in every way similar to those in scarlet livery.

The contrast was so marked, that I could not but pause to admire the one, and to notice how exceedingly the other suffered by the comparison.

GEORGE LOVELL.

Gard. Chron.

DOWNING'S COUNTRY HOUSES.

"THE ARCHITECTURE OF COUNTRY HOUSES, including designs for Cottages, Farm-Houses, and Villas, with remarks on interiors, furniture, and the best modes of warming and ventilating. With three hundred and twenty illustrations."

It may be remembered that we partly promised a continuation of the review published in your January Number. That article noticed the portion of part first embracing cottage designs, without touching upon the farm-house designs, or upon part second devoted to villas, interiors, and furniture. Our admiration of the beautiful simplicity of most of the cottage designs, was freely expressed; and we regret that the farm-house designs do not satisfy the expectations that the author's success in the former had inspired. We quote a few of the judicious remarks that precede the design—

"To make a farm-house realize our own conceptions, it should be especially remarkable for *simplicity* and *breadth* combined. But as there is only one farmer in ten thousand who can afford to build, at once, a farm-house as large as either the fullest convenience or best effect would dictate, we have sought to

make our designs more useful, by keeping them within very moderate limits.

"Again—the only perfectly satisfactory farm-houses are those built of solid materials—quarry stones, small stones and rough-cast or cement—brick, or brick and stucco. We believe it was Dr. Franklin who went into a calculation to show his farming countrymen how many *millions* were wasted by every generation, in building of so perishable material as wood. We fully agree with him, and, wherever the power of choice exists, would by all means counsel the farmer to build of lasting materials, which, unlike wood, will not need continual repairs during his own lifetime, only to be pulled down at the end of fifty or sixty years by his successors.

"On the other hand, when the farmer is obliged to build of wood, he should especially avoid all fanciful and highly finished workmanship, and all slender and frail construction; but using strong timber, of all kinds, he will at the same time give durability and fitness of character to the building he erects."

The foregoing is excellent advice; yet we can not entirely agree with Mr. Downing in deeming it unfortunate that the means laid out for farm-houses, of the average cost of

those now constructed in this country, is not more generally used on brick and stone. In a country where property changes hands oftener than with every generation, common sense dictates that the man who builds for himself, should consider chiefly—almost solely—his own immediate wants; and if these can be more completely satisfied with means saved by the use of wood, then wood should certainly be used. A *well built* wooden house is not so temporary a structure as some suppose, and if occupied by a careful owner, with a few occasional repairs, it may last good a century or more. It has the advantage over brick and stone, that it can be more readily altered, or enlarged, and as some improvements or other of each ten years, render new arrangements necessary to the completeness of a house, this is no small consideration. Another reason in favor of wood, is, that most farm-houses, in a new country, are such cheap and awkward structures, that it would be a pity to build them so substantially as to deter a succeeding, and better educated generation, from tearing them down to make way for an improved style of architecture. Of the materials “more durable than wood, *sun-dried* brick, with stucco, is the best and cheapest; and destined to be used more than any other material for farm-houses, in most parts of the country.

Some of the requisites of a proper farm-house, are thus given by the author—

“In point of taste and truthful expression, a farm-house, as we have before suggested, should never be high. It should rather be spread upon the ground, than be piled up in the air. There is, too, an appearance of rural simplicity—an honest resting on the earth—about a low farm-house, which a dwelling of two full stories never has. And as the second floor apartments in a farm-house are bedrooms for those who go into them merely for the purpose of sleeping, and not, as in a villa, for the purpose of passing the time in elegant leisure, we do not find that farmers

are at all luxurious in their notions of these second floor apartments. We would always, therefore, prefer to build a farm-house of what is called the “story and a half” high—as being less expensive, and more characteristic.”

A great objection to story and a half houses, is the absence of that indispensable store-house for odds and ends—the garret; but this objection could be advantageously obviated, by having a part of the house but one story high, with a steep roof, which would make a garret more convenient than in a two story house.

Design XIII.—“A symmetrical farm-house of stone and rough-cast.” This is the first design of the section devoted to farm-houses. The floor plans give an excellent arrangement of rooms to suit the wants of a farmer’s family. The exterior, the author shall first describe:

“If we have among our readers a single farmer who is ambitious, who loves show on the surface”—(by the way, where else is it to be found)—“who likes to dazzle passers by with a great shingle palace stuck full of windows, he will by no means admire or approve this design. But, on the other hand, every reader who is a farmer at heart—who loves his farming life because it is simple, and honest, and unpretending—because it has no sham and no artifice—who wishes his home to be significant of this very life, will certainly find something agreeable and satisfactory in this plan of a farm-house.”

You certainly have a graceful way, Mr Downing, of presenting a dilemma with two pretty rough horns, to those who have the temerity to differ with you. We believe it was Emerson, who, once being upbraided for expressing sentiments not precisely in accordance with the Gospel, replied—“Ah! Christ possessed great wisdom, but in this instance he was mistaken!” It does not require so much boldness to affirm, plainly, that many there be, who are “*true farmers at heart*,” “and a’ that,” who will by no means admire

or approve this design. Compare it with designs III, VI, IX, and say which is the most *appropriate American farm-house style*. Inasmuch as it appears to be simple, and thoroughly built, it is satisfactory. Its form, its windows, porch, and chimneys, exhibit a just taste, and thorough construction. We find fault with it, because it expresses only the thorough-going *utility* of the ordinary life of a farmer—it looks *merely* well built and comfortable, like the abode of those who have no higher idea of a *home*, than that it shall be a right comfortable place to work, rest, and feed. And, with shame be it said, it does truly express the life of a large body of our American farmers. But we entirely disagree with Mr. Downing that such a life should be architecturally expressed any where, but in the abodes of dumb creatures. If an *American* farmer has so low an idea of the dignity of his position, as to be devoid of ambition to cherish *rustic simplicity*, (otherwise called “blessed ignorance,”) and to be contented with the plodding life of a day laborer, then we hope, for the credit of the neighborhood that owns him, that he will not betray his whereabouts by means of his house.

There is one feature about this house that can not lay claim to propriety. We mean the bold gable and coping of the Tudor style, which, aside from its repulsive appearance in a country-house, has many serious objections in point of utility; and we can not do better than to quote one of our distinguished writers on architecture, for the reasons:

“Viewing the different styles of building with reference to the economy of first cost, as well as after-expenditure for repairs, we may add that for this climate, all styles, or modifications of styles, with broad *projecting* roofs, are greatly to be preferred. These projecting roofs not only shelter the building in summer against heat, but they protect it in the most effectual manner against the violent storms, ever changing from snow to rain, of our northern winters. The difficulty and

expense of keeping a roof in order, with the flush parapet of the Tudor, or the molded cornice of the Grecian style, is double or treble as great as in the Italian or Swiss mode of building; because, in the former style, in case of any defect, overflow, or leakage in the gutters, all the water is carried by the projecting eaves far beyond the walls of the house; while in the latter it runs down the face of the wall, or, what is worse, finds its way into the interior of the house. Hence, it is sufficiently evident, that the outer walls of a house when they are of brick, stucco, or wood, will last twice as long, and require only half the repairs, under a roof projecting two feet or more, than under such a roof as is usually built in a common dwelling in any modification of the Grecian style.”

Design XIV.—“A Farm-house in the Swiss manner.” A house of compact form, with two broad roofs extending so as to form a veranda all round the house, and a gallery at each gable. We like this design no better than the foregoing: the latter is better adapted to a warm, the former to a cold climate; but neither are “models.”

Design XV.—“Bracketed Farm-house of wood.” This strikes us as a pleasing example of a *large* farm-house; though we usually much prefer to see the kitchen offices not entirely included in the main building.

Design XVI.—“A Farm-house in the English Rural style.” This design, the author presents to those who are “looking for an expression of mere beauty in a farm-house.” It is of stone, and there are some very pleasing features about it. The roof is steep, and projects warmly and protectingly; the windows are few and large, and appropriate; the bay-window, veranda, and balcony, are interesting and entirely proper features—altogether it reminds us of the picture of *Moor Cottage*, in “Jane Eyre,” though it does not bear up under ivy, on a lonely heath.

There is, however, one feature of this

house—the truncated gable—which the author stops to admire, though we can not pass it without expressing our utter dissent from his opinion, should we thereby incur the unpleasant appellations of the quotation that follows:

"These *truncated* gables would be the first things objected to by an uncultivated builder, or even a pedantic architect, as unmeaning and valueless. In our eyes they are, in a farm-house, sources of beauty and picturesqueness. They give an air of rustic modesty, the very opposite to the highly finished artistic beauty of the regular pediment, or the carved gables—an effect which is peculiarly expressive of honest, homely, unaffected country character. United to a broad roof of this kind, they express an easy, unrestrained, unconventional comfort, which compares with the highly finished, architectural style of an elaborate villa, as the wide, shadowy straw hat with which the farmer covers his head in the easiest and most comfortable manner, does with the exact and polished beaver of the man of undisputed fashion."

Rather, we think, as the *slouched hat* of the street loafer or rowdy, does with "the exact and polished beaver" of the respectable citizen. The former would be much more likely to attract the attention of an artist, as a picturesque feature for a painting; but should one adopt it, with other parts of his dress to correspond, and then, with an eye single to the fitness of things, conduct himself accordingly, it would argue a want of self-respect, that would speedily meet its reward in the waning regard of others.

Proud, but simple dignity, not rustic simplicity, should characterize the American farmer. His shadowy broad-brim should express as marked a contrast with slatternly vulgarity, as with the pink of fashion. "Rural simplicity" — "rustic modesty" — "homely, unaffected, country character," etc. are the honied phrases of the poet or sentimentalist, corresponding to the "yeoman," and "bone and sinew" of the demagogue—

all conveying about as complimentary an idea of the character of those to whom they are applied, as the expression, "an innocent young man," does of that "universally respected" individual. Is it desirable, Mr. Downing, so far to cherish the manifestations of "rustic simplicity," as to desire to see a class of men "bowed by honest toil," clothed in suits of "hoddens-gray," with slouched hat, and shame-faced eyes—and exhibiting all that picturesque contrast with the "higher classes," that is so attractively portrayed in the literature of the past? Or, on the other hand, should we not, by all the means in our power, hasten the time when every American farmer shall be, and *feel himself to be*, a "country gentleman."

It appears to us, that the truncated gable of a low house, gives the same expression in architecture, that a stooping figure and slouched hat gives the human expression; and we will venture to define the meaning of truncated roof, as applied to dwellings, to be the *architectural expression of servility*. If it were the duty of those who design farm-houses, to express character and manners only as they *are*, then this feature might occasionally be used—and quite too truthfully. But has not the domestic architect a higher province, viz: to express the life and character of the American farmer *as it should be*? If our dwellings have any influence on our character, should they not be of a composition to improve us? It is a very common vanity, to fancy our own things are pretty nearly what they ought to be; and we observe more closely those objects of others, which most resemble what we value of our own. Now, if the house of a farmer be rude, and uncouth, and servile in expression, he can hardly avoid perceiving the propriety of some correspondence in himself and surroundings; and he will naturally assume a boorish rusticity. If, on the other hand, his house expresses a

higher cultivation than he possesses, he will instinctively assimilate, in some degree, to what it assumes him to be, and his self-love will inspire him to appreciate beauty, to which he would otherwise have been blind.

But why should an American farmer be humble and rude?—why should his home express less cultivation of mind than that of the artizan, or merchant?—why may he not appreciate as well as the dealer in calico, the beauties of art?—why should any one suppose that because his hands are harder, and his skin browner, that his senses, and his brain, were not given him for the same use as their's? We can see no good reason why the in-door life of a farmer should differ from

that of others, who devote most of the day to business. His business office is on a nobler scale, but that is certainly no reason why his home should be more rude, or his home circle less truly refined; and we hope the time is not far distant when we shall have a system of *free* education so complete, that every family circle throughout the land may be an Art Union, where literature, music, painting—every fine art can be lovingly appreciated and promoted.

Design XVII.—“A bracketed farm-house in the American style.” This is a building of wood, with vertical boarding, and with the exception of one gable truncated, is a good example of a commodious American farm-house. It would be improved by a greater projection of the roof.

Design XVIII.—“A Northern farm-house.” A large stone dwelling, the *plan* of which is recognized as an old acquaintance—being quite similar to one published by us in the Albany Cultivator, of July, 1847. The perspective elevation, however, is, as far as we know, entirely original with Mr. Downing. The main part is square, and a steep hipped roof, which, in a farm-house, we consider a waste of shingles, and of garret room, without

an adequate equivalent in external expression. However, the style is truly *Northern*, and if we had been reared a few hundred miles nearer the pole, perhaps we should have reasons for liking it better as it is.

Design XIX.—“A Villa farm-house in the bracketed style:”—has a perspective elevation that is every way pleasing. This is the last of the farm-house designs; and it gives us great pleasure to know that, if some of them are not such as should be expected from an accomplished American architect, imbued with the progressive spirit of his country, the cottage designs which precede them, are generally so well adapted to the wants of both villagers and farmers, that there is little prospect the latter will select any of the exceptionable designs.

The next chapter is full of valuable practical information, and embraces ample directions with numerous cuts, for the construction of chimneys and fireplaces—ornamenting the roofs of houses—patterns for decorative shingles—mortar floors—how to stain wood-work—cheap washes for wood, and for brick and stucco—cheap cottage paint—cement for stopping joints—ventilation—economy in practical building—exterior color for country houses—and, vines for the decoration of cottages.

The last chapter of Part I, is devoted to information concerning the construction of farm and cottage stables, and is illustrated by numerous wood cuts.

Part II, is devoted entirely to *Villas, Interiors, and Furniture*. In its composition and embellishments, it every where exhibits that union of common sense and practical refinement, that has given the author his fame, and which was so pleasingly manifested in his *cottage* designs.

✂ This Review was unavoidably divided; the remainder shall appear in the next number. The high character of the writer will prevent the reader's losing his interest in the subject.

VEGETABLE PHYSIOLOGY.

NUMBER ONE.

To the Editor of the Horticultural Review :—

WITH your permission, I propose to furnish to your Journal an occasional article on vegetable physiology; which I shall make as plain and practically useful as I can—and, as in all investigations, the best plan is to begin at the beginning, I submit for your consideration the following programme: first, I shall say something in general terms of the distinguishing characteristics of the three great kingdoms of nature, ANIMAL, VEGETABLE, and MINERAL; next describe the various bodies which enter into the composition of vegetables, then give the anatomy of plants, after which we may be prepared to apply the principles involved, to the various operations of the farmer and gardener.

J. S.

It may be considered by many out of place to introduce anything not directly the result of experiment, into a periodical professedly practical, supported by practical men, and intended especially for their information. To some extent this may be correct; but when we remember that a single experiment seldom produces more than a single fact, a fact, too, which often has its origin in a set of agencies, with many of which we may be unacquainted, we can not avoid the conclusion, that unless we be perfectly certain, that all the circumstances of any new case are precisely similar to those of the old, so far from instructing us, the fact may mislead.

Isolated facts independent of their philosophy, are of little use to us; they are "stubborn things," to be sure, but, stubborn as they may be in support of truth, when properly arranged and truly philosophized upon, they are no less so in defense of error, when wrongly interpreted.

I think it may be confidently asserted that

no heresy in religion, politics or philosophy, has ever obtained a hold on the minds of men that could not quote well established and truly attested facts to support its pretensions. Experience can guide us only where all the circumstances are precisely alike. In the complex and mysterious laboratory of nature, where the action of the most familiar agencies is but imperfectly known, and that of many not at all understood, the difficulty of profiting by experience will be at once apparent. I do not wish to undervalue the importance of well-directed experiment, it is the only basis on which a true philosophy can rest; but it often happens that the best experimenters are not the best philosophers. The necessary avocations of the farmer or gardener allow him but little time to examine the theory of a subject so complex, and involving so many different agencies.

The importance of general views, or in other words, well arranged and definite ideas on any practical matter engaging our attention, can not be denied, yet it is the fashion to decry every attempt at applying the received rules of philosophizing to the most important of all human pursuits as "*mere theorizing*;" the reason of this may be found, to some extent at least, in the fact, that on the very threshold of the study of vegetable nature, the student is met by the appalling announcement, that before he can enter the portals, he must be an adept in chemistry, botany, geology, electricity, etc., to the end of the chapter of natural sciences. Ponderous tomes must be waded through, and he who "earns his bread in the sweat of his brow," feels but little inclination to "burn the midnight taper." True, some knowledge of all these is absolutely necessary. The works of the Creator are so linked together and mutually de-

pendent, that to be thoroughly versed in any, something must be known of all. The names *Carbon, Hydrogen, Oxygen*, are but sounds conveying no definite ideas to any but the chemist, the formation of soils by the disintegration of rock, can only be properly understood by the geologist and mineralogist. Botany must arrange, compare, identify for us, and the mysterious but undoubted agency of electricity in vegetation, is alone sufficient to engross the intellect of the most gifted.

Whence arises the many disputations among our practical horticulturists? such as the somewhat notorious and interesting strawberry question. Facts, *undoubted facts*, observed by men equally able, and equally honest, and both parties able and honest, seem to stare each other in the face from opposite sides of the question. The pomologists, too, have had their share of the trouble; each party has a budget of *facts* in his pocket, ready to be produced, as occasion may require.

The ideas of the theorist may often be

erroneous, but perhaps not more frequently so than those of the merely practical man; both have their appropriate spheres of action and of thought, and both are mutually dependent. The philosophical theorist must have the facts of the experimenter, the experimenter, the philosophy of the theorist.

Being devotedly fond of the pursuit of horticulture, though circumstances prevented my indulgence of it beyond a very limited extent, and under most unfavorable circumstances, I was lead to make the nearest approach to it possible—the study of *vegetable physiology*. My business gives me some advantage in the chemical department of this extensive and deeply interesting science; the necessity of occasional out door exercise for health, induced me to visit the woods, and in order to render my walks more pleasant to the mind, that they might the better invigorate the body, but perhaps more from inclination than either, I was introduced to the study of systematic botany.

T. SALTER.

POMOLOGICAL CONGRESS.

The Report of the Proceedings, October 2, 3, and 4, 1851.

THANKS to the kind thoughtfulness of M. B. BATHAM, editor of the *Ohio Cultivator*, this document has been received. It constitutes sixty pages of the mass of three hundred and thirty-six pages which make up the "FIFTH ANNUAL REPORT OF THE OHIO STATE BOARD OF AGRICULTURE."

This is the matter which the editor of the Review expected to have collated during the month of December, and to have presented to his readers the most interesting portions of it in successive numbers, during the succeeding months. It was retained from publication in this periodical perhaps very properly—a question, however, which need not now be discussed; the volume is before the people, at least it is *printed*, and will, it is

hoped, be accessible—unless, like some of its predecessors, it should remain locked up in some of the hiding places about the capitol, instead of being distributed among the farmers. Of the work itself, little can be said at this time, as the attention of the readers as well as of the editor of these pages, will be most anxiously turned to the portion which relates to their own interests, the fruit department—or the *Report of the meeting of the American Pomological Congress*—which shall now be analyzed in part, and such portions as appear most interesting, shall be reproduced from time to time.

It is well known that this Congress owes its meeting to the adjournment of two parallel institutions, "The North American Pomo-

logical Convention," and the "Congress of Fruit Growers," each of which resolved at their meetings in 1849, that they would unite in one, and convene in this city.

On the second day of October, 1850, the Delegates assembled for the purpose of effecting an organization, and in the absence of the President, M. P. Wilder made a temporary appointment of Dr. John A. Kennicott, as Chairman, and P. Barry, Secretary. All persons feeling an interest in the discussion were invited to enroll their names as members, in connection with the regular delegates from societies; a large number of persons were present.

A committee was appointed to report lists of officers for the convention, who, after deliberation, furnished the following:

President.

DR. W. D. BRINCKLE, Philadelphia, Penn.

Vice Presidents.

J. A. Kennicott, Illinois.
Lawrence Young, Kentucky.
James Dougall, Canada West.
A. H. Ernst, Ohio.
James Sigerson, Missouri.
P. B. Cahoon, Wisconsin.
Lewis F. Allen, New York.
Joseph Orr, Indiana.
Edward Tatnall, Jr., Delaware.
Rt. Rev. Bishop Elliott, Georgia.
J. G. Drayton, South Carolina.

Secretaries.

F. R. Elliott, Ohio.
P. Barry, New York.
J. A. Warder, Ohio.

The second day's session was held in the Speaker's Tent, at the grounds of the State Agricultural Fair.

The regular routine of business was attended to, committees appointed, large collections of fruits received, exhibited and examined.

Several interesting discussions were had, chiefly upon western fruits, and the valuable reports of the several State Committees were

handed in and referred to the Secretary, to be collated and prepared for publication.

On the third day's session, the Congress again assembled in the Tent—the Committee on Seedling Fruits presented reports.

The Committee on fruits for rejection, for further trial and worthy culture, reported the following lists, which were adopted:

List of Pears unworthy of culture.

Spanish Bon Chrétien; True Gold of Summer; Hessel; Summer Rose; Petit Muscat; Rousselet of Rheims; Princess of Orange; Ah Mon Dieu; Bleecker's Meadow; Huguenot; Michaux; Beurré Knox; Franc Real d'hiver; Clinton.

The "Belle of Brussels" was proposed to be placed on the rejected list, but several gentlemen seeming inclined to give it further trial, it was not entered then.

List of Pears that promise well.

Paradise d'Antomne, Stevens Genessee Onondaga or Swan's Orange, Doyenné, Goubault, Nouveau Poiteau.

List of Apples to be rejected.

Egg Top, Cheeseboro' Russet.

List of Apples that promise well.

Northern Spy, Melon, Mother, Hawley.

The Stevens Genessee Pear was regarded by many of the Congress as worthy general cultivation, but there being one or two objections made, it was put on the list as promising well.

Mr. Saul, as one of the Business Committee, spoke of the Beurré Langlier, Beurré Cotee, and Beurré Quentin, as valuable varieties that should be more generally known.

Mr. Saul then introduced the Belmont or Gate apple for remarks. Mr. Wood spoke in favor of it; so also, Mr. McIntosh.

Mr. Hodge offered the following resolution:

Resolved, That the various fruit Committees be requested, hereafter, to designate, in their reports, a list of fruits that they can recommend for general cultivation—a list that promise well, and, also, a list they deem unworthy of cultivation. Adopted.

Mr. Saul spoke of the following apples as promising well, and worthy of culture, viz: Eustis or Ben apple, Monmouth Pippin, Peach Pond Sweet, and Sturmer Pippin.

Mr. Saul then introduced the Rome Beauty, as an apple that had impressed him favorably. Dr. Barker, Mr. Young, Mr. Wood, and Mr. Putnam, all spoke well of it.

Mr. Saul next called up Kaighn's Spitzenberg. This, Mr. Springer defined as the same known in his section as "Long John." Messrs. Ernst, Hodge, Miller, McIntosh, Mosher, and Barker, remarked upon it, but generally against it.

Mr. Saul then called up Pryor's Red. Messrs. Young, Sigerson, Barker, Mosher, and others, spoke highly in favor of it.

Mr. Allen moved that the lists of fruits reported upon, by the two or more past conventions, be entered in these reports—carried.

The Committee on State Fruit Committees, reported the following list, and requested that the Chairman of Each State Committee be authorized to fill up the number of his committee to five members—accepted.

List of State Fruit Committees.

Massachusetts—Robert Manning, Salem.

Vermont—C. Goodrich, Burlington.

Maine—Henry Little, Bangor.

New Hampshire—Isaac Hill, Concord.

Connecticut—V. M. Dow, New Haven.

New York—B. Hodge, Buffalo; A. Saul, Newburgh.

New Jersey—Thomas Hancock, Burlington.

Pennsylvania—Thomas P. James, Philadelphia.

Ohio—A. McIntosh, J. P. Kirtland, Cleveland; J. A. Warder, Cincinnati; S. A. Barker, McConnellsville; C. Springer, Meadow Farm.

Kentucky—Lawrence Young, H. P. Byram, Louisville; Mason Brown, Frankfort; H. T. Duncan, Lexington; P. Blanchard, Maysville.

Virginia—Yardly Taylor, Loudon.

Delaware—Edward Tatnall, jr., Wilmington.

South Carolina—J. G. Drayton, William Summer, Charleston.

Georgia—Dr. Camac, Dr. Ward, Athens; Johnson J. Harris, Milledgeville; D. Green, Macon; Richard Peters, Atlanta.

Louisiana—James Evans, New Orleans.

Tennessee—L. P. Yandell.

Mississippi—M. W. Phillips, Edwards.

Missouri—Thomas Allen, James Sigerson, E. Abbott, St. Louis.

District of Columbia—Joshua Pierce, Washington.

Indiana—James Blake, Indianapolis; J. Bell, New Albany; ——— Scott, Madison.

Illinois—John A. Kennicott, Northfield; J. B. Turner, Jacksonville; S. Francis, Edson Harkness, C. R. Overman.

Michigan—J. C. Holmes, Detroit; W. H. Scott, Adrien; A. T. Prouty, Kalamazoo.

Wisconsin—F. R. Phoenix, Delavan.

Iowa—Henry Avery, Burlington.

Canada West—James Dougall, Amherstburgh.

And for General Chairman over all, A. J. Downing, New York.

Mr. Hodge moved the following—

Resolved, That when this Congress adjourn, we do so to meet in the city of Philadelphia, on such a day in the month of September, 1852, as shall hereafter be designated by the President of the Congress—adopted.

The several committees appointed by this Congress, reported upon the subjects referred to them.

Several complimentary resolutions were passed, and the Congress adjourned as per resolution.

TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY.

THE weekly meetings have been kept up with interest, upon which occasions some very fine fruits have been shown, and samples of wine of last year's vintage—several collections of seeds were distributed, among which were some parcels from California, including several pines from A. Randall, of Monterey.

These have all been disseminated, and it is hoped that the rarities will have fallen into good hands. Grafts and cuttings of various kinds have been freely distributed likewise.

On the first of March, the monthly meeting was held, and the show of Azaleas, set for that day, embraced some beautiful plants,

among which were—a Maitlandica, Smithii, Elegans, Alba, Watalonia, Hirstii, etc., from S. S. Jackson, to whom the premium was awarded; they were very fine plants, and well grown.

John Sayers also exhibited Azaleas;—a fine show, embracing some of the best varieties, and prettily grown plants.

A parcel of Asparagus was brought in by George Swanson, of which the Committee say, first-rate, for forced Asparagus. The Gardener informed the Society that the forcing process had occupied ten days—it was brought on by linings around the old bed, in the garden, and a covering of sash—a very simple process.

There was also a fine display of fruit at this meeting; from T. V. Peticolas, ten varieties; from M. S. Wade, eighteen kinds; and from Lewis Sanders, Grass Hills, Ky., some choice specimens of Apples, with an interesting communication, the consideration of which having been especially referred to the Committee, the following Report was rendered at the next meeting:

CINCINNATI, March 8, 1851.

*To the President and Members of the
Cincinnati Horticultural Society :*

Your Committee beg leave to make the following report, on the Apples handed to us on the 1st March, sent by Lewis Sanders, of Kentucky.

The Apple he calls "Favorite" was not known to any of the Committee. In size, it is small; form, globular, flattened; color, dark, dull red; flesh, crisp, and juicy, and is a pleasant and agreeable Table Apple, and should rank among our best.

The second Apple he calls Common Pippins; they are the Yellow Newton Pippin, a valuable variety, remarkable for their high flavor.

The third were "seedlings, belonging to the Pippin family;" size, large; form, round

and oblong; flavor, good; but not equal to some we now have in cultivation, and the flavor is peculiar, not agreeable to some.

The fourth, he calls "Geniting;" this Apple is familiar to the Committee, and as it is well known by several names, we will give the following synonyms :

"Rawle's Janet,"	"Neverfail,"
"Yellow Janet,"	"Rockromain,"
"Gennetting,"	"Indiana Jeanetting,"
"Jennett,"	"Geniting."

Size, medium; form, globular, sometimes slightly conical, and flattened at the base, also at times largest on one side, but mostly of very regular form.

Calyx, small, in a shallow basin, and mostly closed; stem, slender, somewhat long, set in a moderately broad, and not deep, cavity; color, generally dull, brownish, red, on a greenish, yellow, ground, clouded with smutty blotches, the red often terminating in streaks at the calyx; flesh, yellowish white, firm but crisp, and abounding in a sprightly juice; flavor, slightly sub-acid, lively and pleasant; ripe from January to April—retaining its flavor and juiciness; good for table or kitchen; bears freezing.

The origin of this fine fruit is a matter of some doubt—it is said to have been carried from Virginia to Kentucky, by John Lightfoot, and supposed to have originated in the former State. However this may be, it deserves a place in every good collection, and is a valuable apple to cultivate for market; when others are in full bloom, it seems unwilling to expose its delicate blossoms to the uncertain smiles of spring, and thus escapes the late frosts—hence, it is often known as the "Neverfail."

The following reasons are given by Col. Sanders, why one-third of every orchard in Kentucky should be planted with "Geniting," which he calls **THE KING OF THE FAMILY**.

1. Its growth is good and quick; strong, healthy wood.

2. It blossoms very late, and may thereby escape spring frosts.

3. It is a full and sure bearer, and the fruit will hang on the tree till Christmas.

4. It makes the best cider, and as much as any other Apple.

5. It keeps sound till June.

6. It is a very high flavored, juicy, aromatic Apple.

S. M. CARTER,

For the Fruit Committee.

Grafts of these Apples, and the Bohanon, were afterward received and distributed.

On the 8th of March, there was a fine display of Hyacinths, among which were twelve beautiful varieties from George Watson, of Spring Garden Nurseries; and seventeen varieties, with some Duc von Thol Tulips, from Anthony Eckart, gardener to Henry Brachman; to the latter the premium was awarded. Anthony Pfeiffer exhibited a very handsome collection of Cinerarias, many of which were very fine—they received a gratuity of two dollars.

S. S. Jackson exhibited a very pretty *Sarracenia*, species undetermined; also, at successive meetings, some beautiful baskets of cut flowers, embracing, among other rare and praise-worthy articles, the following: *Clematis azurea grandiflora*, Azaleas, in variety, of which, *Salteria*, is a seedling, of a very perfect shape, and a pale, rose color, *Bletia Tankervillea*, *Heliotropes*, 3 varieties, and fifteen varieties of *Verbenas*, many of which are new and rare, Magnificent, and other seedlings, and *Reine du jour*, *St. Marguerite*, *Marie Louise*, *Iphigenie*, etc., imported.

Also, a beautiful seedling Azalea, named *Warderia*, which is remarkable for the number of flowers in its truss—color, white, with stripes and splashes of pale blush.

Again, on Saturday 29th, there was a large assemblage of members, and quite a display of fine fruits. The apples from M. S. Wade were various, and many beautiful. Those

from A. Worthington were on the two extremes of size, monstrous Newtown Pippins, and exquisite Lady or Api petit. M. McWilliams, Dr. A. Whipple, and others, contributed.

A. Gove presented apple and pear grafts, from the Granite State, in fine condition, for which a vote of thanks was awarded to him.

The compliments of the Society were presented to L. Broadwell, for the Agricultural Reports of the State Board of Agriculture, which he sent in.

Messrs. Sayers and Jackson again enlivened the rooms with beautiful flowers; the former, fine plants of Azaleas, and the exquisite now hardy flowering shrub, *Spirea prunifolia pleno*; the latter, exhibited a very handsome basket of Roses, and *Verbenas*, of the choicest kinds, with *Clematis azurea grandiflora*.

Among these, were the *Souvenir de la Malmaison*, *Fortune's New Yellow Rose*, and many of the best and newest *Verbenas*—*Reine du Jour*, *Iphigenie*, *Defiance*, *Snowflake*, *Magnificent*, etc. etc., for all which the thanks of the editor are due.

Also, another new Azalea, of great beauty, white, with an occasional stripe of purple, for which the name *Boul de Neige* was proposed, on account of its compact habit, and white flowers.

BUFFALO HORTICULTURAL SOCIETY.

At a meeting of the Buffalo Horticultural Society, held on the 19th of July, 1851, the following gentlemen were elected officers for the ensuing year:

President.—B. HODGE.

Vice Presidents.—A. Bryant, H. B. Potter, J. Y. Marten, J. W. Brown.

Corresponding Secretary.—W. R. Coppock.

Recording Secretary.—J. B. Eaton.

Treasurer.—A. A. Howard.

CORRESPONDING MEMBERS.—The follow-

ing gentlemen were elected Honorary and Corresponding members:

Hon. M. P. Wilder, } Boston.
 C. M. Hovey, Esq., }
 Dr. W. D. Brincklé, Philadelphia.
 Dr. J. A. Kennicott, Northfield, Illinois.
 L. Young, Esq., Louisville, Kentucky.
 A. H. Ernst, Esq., Cincinnati.
 David Thomas, Esq., Greatfield, New York.
 B. P. Johnson, Esq., Albany.
 J. C. Holmes, Esq., Detroit.
 James Dougall, Esq., Amherstburgh, Canada West.

BUDDING AND SEEDLING PEACHES.

MR. EDITOR:—My experience in the growth of peaches, agrees with that of your correspondents, who state that the seedling peach tree is a more certain bearer than the budded tree. From this experience, I do not conclude, however, as some of your correspondents do, that budding has a tendency to depreciate the bearing qualities of the peach. The comparison is indeed a very loose one, and is between things unlike,—between the improved peach and the common peach, and the more general bearing of the latter kind, affords no evidence on the question whether budding affects the bearing quality. If any person has made a comparison between any particular seedling tree, and other trees propagated from it by budding, and found them to differ in bearing qualities, under the same treatment, in the same place, the experiment would then call for an explanation, but until such an experiment be made, and such a result found, any reasoning on the results is a conjectural solution of a conjectured fact.

When I state that the seedling peach bears more certainly than the budded tree, I mean in fact no more than this—that the common, unimproved kinds are hardier than the improved kinds. Of this fact I am well satisfied. Why it is so, I am not able to explain, but I suppose, and do not doubt, that the embryo of the common peach is better pro-

tected against the extremities of cold, and that the process of amelioration in the peach in some way modifies the bud, and leaves the embryo more liable to be killed in the winter. I have had many seedlings which fail to bear whenever the budded trees fail, and accordingly, I set them down as very fine kinds. And, among my seedlings, I have noticed a number that have the small inconspicuous blossom, referred to by Mr. Springer, as one of the results of budding—but which I have been in the habit of regarding as one of the marks of amelioration. Many of the finest peaches have such blossoms, and that they were so from the first is certain—for budding produces no change in the leaves, blossoms, or fruit, and hence we practice it.

Budding can in no way operate to render the peach less fruitful, unless the tree itself becomes more feeble by the insufficiency of the stock.

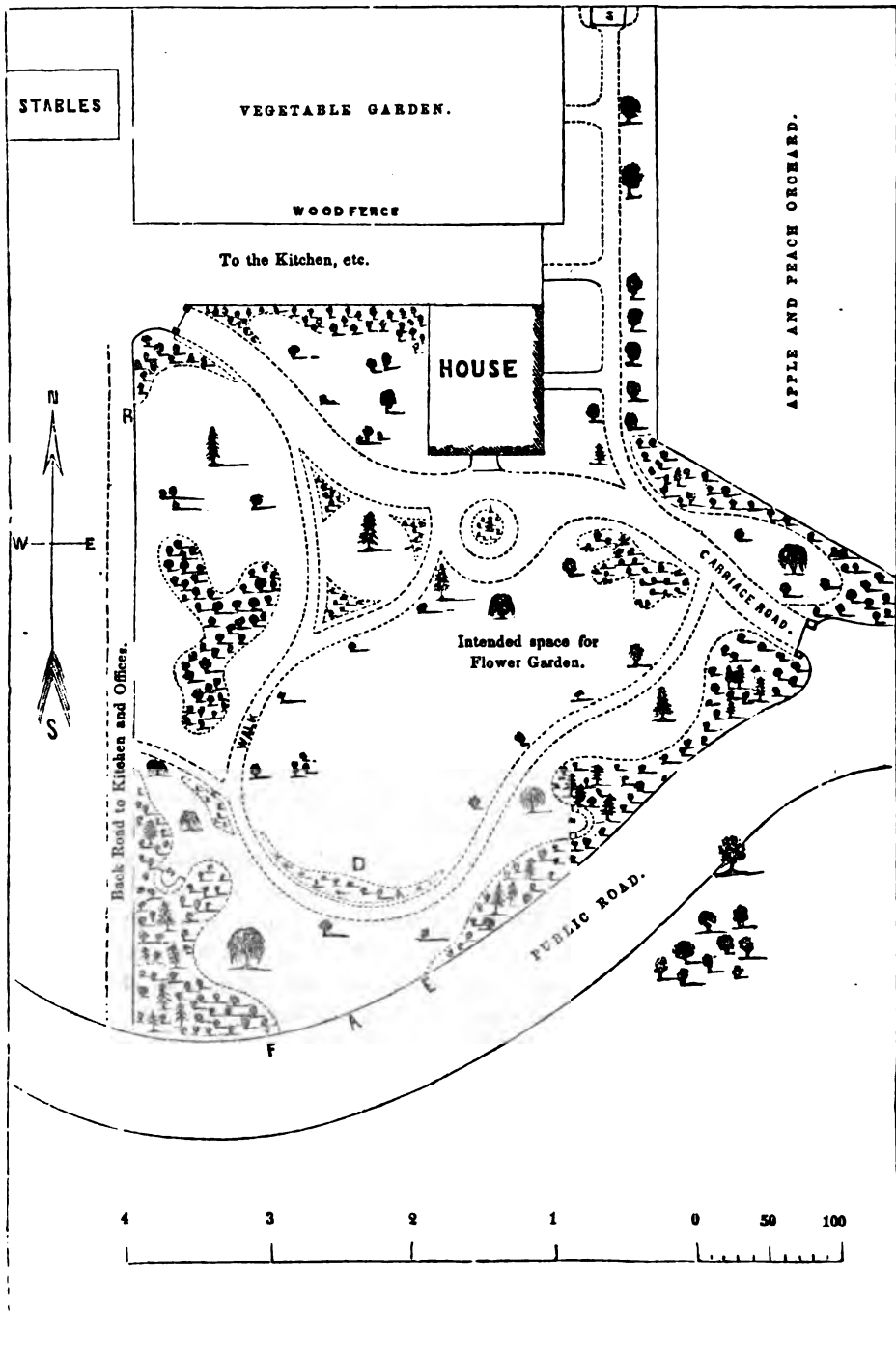
It is suggested, however, that too luxuriant a growth in budded trees is unfavorable to fruit bearing. Luxuriance of growth may postpone the time of bearing, but when the tree is perfected, the formation of buds will be the more certain and abundant.

The peach must ever be an uncertain crop in Ohio, where the mercury so often falls to twelve degrees below zero. That degree of cold will generally kill the peach, but in favorable situations, such as close yards, in the city with high surrounding walls, and on the tops of lofty hills, many trees will bear, while all others steeped in colder air will lose their fruit.

I have another reason for growing some trees from the seed, which is, that what may be called the middle kinds are better for many purposes than the improved kinds propagated in nurseries. I may specify peaches for stewing, and for cutting up to eat with milk.

JOHN H. JAMES.

Urbana, 17th February, 1851.



LANDSCAPE GARDENING.

NOTE.—This article was written sometime since—the reader will therefore excuse any apparent plagiarisms, or repetition of expressions that occurred in the last and previous Numbers.—ED.

The Design which is the subject of the following remarks, was made for R. P. RESOR, Esq., of Clifton, and is now in course of execution. The situation selected for the house, is one commanding extensive prospects of the surrounding country, being on one of the highest points of land in this beautiful locality of hill and dale. The outline of the house described on this plan, only indicates the position it is intended to occupy. I had surveyed the ground, and made this design prior to Mr. Rogers, the architect, making his plan for the house. When consulted on the matter, he fully coincided in the choice of site.

On looking in the direction of the letter A, from the south front of the house, the ground has a gradual descent, down which, and over the bed marked D (intended to be planted with low growing shrubs, roses, and herbaceous plants) in front, you have a beautiful view of the Ohio river below Cincinnati, with the opposite hills and woods in Kentucky, forming a fine back ground to a landscape of great beauty; which is the reason for my discontinuing the belt from E to F, that no large trees may be planted, to intercept at any future time this magnificent prospect. Looking from the west front of the house, in the direction of the letter B, (down which line the ground descends rather quickly, but still moderately), you have a splendid view of the Mill Creek Valley, with the village (or town) of Cumminsville in the distance, backed by the beautiful hills and woodlands about Mount Pleasant.

From the walk on the east front of the

house, as well as from the house itself, you have a fine view of the handsome villa residences in the rural town of Clifton, with the church, and a varied prospect extending some fifteen to twenty miles back in Hamilton county.

You will perceive on reference to the plan, that the vegetable garden and orchards are so placed as to be concealed from the ornamental part of the grounds, and are still of easy access from the house. So are the stables, with a back road for the hauling of coals, wood, hay, etc., etc., without having to pass through the pleasure grounds, which should always be avoided, (where it is possible to do so.) The gate at the entrance, as also that for access to the stables, is concealed by planting.

I propose a wire or sunk fence (or Ha Ha) along the line of the back road. The sunk or ha ha fence will be decidedly the best—(and cheapest in the end)—as by this means the road will be concealed, and you can look over it without perceiving any visible boundary, and enjoy the magnificent prospect: and the cattle can graze up to the confines of the pleasure ground; and it is a well known and admitted fact, that animated nature adds great beauty to the landscape. On the south side and up to the public road, I should recommend a light ornamental iron or wire fence, with an Osage Orange hedge planted on the inside.

The large trees indicated on the plan on the east side of the house, are at present growing on the ground, and are nearly all the trees which now occupy it; but facing the southwest corner of the house, and within two hundred yards of the pleasure grounds, there is a fine wood of native forest trees. The walk as shown going out of the grounds on the west side, (by a small iron or wire

gate), leads into a beautiful ravine in this wood, a view of which you obtain from the house, and from various parts of the grounds. The shady retreats formed in the shrubbery, on the south and west sides of the grounds, and designated by the letter S, are intended to be occupied with rustic seats, formed of the crooked branches of trees.

The space on the plan indicated for the flower garden, is proposed to be occupied by one, to a model of which the Cincinnati Horticultural Society awarded me the first premium of a silver cup, value \$25, at their last fall exhibition, (the scale of which would be too small to show with any effect on this plan, but as soon as you can spare room, it is at your service for the benefit of your readers.)

Mr. Resor had not decided of what construction he would have his green houses and vinery, and was undecided when this design was made where he should place them, consequently they are not placed on the ground plan. The space allotted for vegetable garden, is a little over half an acre, the apple and peach orchard about one and a half acres, and pleasure ground, etc., one and a half acres.

It is my general practice, as well as the practice of most of the English landscape gardeners, to furnish a list of trees and shrubs required in the formation of a new place, together with an enlarged plan marking the exact position of each permanent tree and shrub intended to remain, (in contradistinction to those only intended as nurses, and to be removed when they have performed their office), so that in case of death they may be replaced by one of the same kind or habit of growth; but I find much difficulty in the western country in supplying this list from our nurseries, especially of the best native forest trees. Our Nurserymen must bestir themselves, and raise these from seed, as there will shortly be a growing demand for them;

for we are induced to cry out in the language of song "Woodman, spare that tree!" The people seem to have no mercy on them, and some of the finest sites for villa residences in the vicinity of Cincinnati, are thus despoiled by the woodman's ax. We shall soon be compelled to go extensively into the rearing and planting of trees, or our landscapes will have a very bald appearance. One circumstance which has induced me to make these remarks, is, that I have observed on some grounds recently laid out, almost nothing but evergreens planted, to the almost total exclusion of our fine deciduous forest trees.

I am of opinion the World's Fair will have a mighty influence in promoting the advance of Horticultural taste in America; our wealthy merchants will go to England, and will see what great effects are produced on a limited space of ground by a judicious selection and planting of trees and shrubs; and they will be tempted to purchase some of their fine evergreens, and other trees, and import them into various parts of the United States. This will give a new impulse to horticulture, and as others follow their example, our Nurserymen will find it to their interest to propagate them.

But I am digressing. I will return to the subject of forming a list of trees and shrubs suitable for planting a given place—for the best design may be spoiled by a few trees or shrubs injudiciously selected, or misplaced. The landscape gardener should study the future effects to be produced, and picture to his mind's eye how the place will probably look in fifteen or twenty years, providing his instructions (always to be given to his employer in writing) are carried out; for in some cases, if only a few of the permanent trees or shrubs should die, or be taken away, or not planted in the places indicated on the plan, the whole design may be ruined. It would be unfair to criticise any place as the work of

an individual, if his instructions had not been fully carried out, or if a sufficient time had not elapsed to show what the place was intended to become—which should make us careful on examining the work of another;

and if we see any errors, try to ascertain before we find fault, whether the design has been carried out, or otherwise.

RICHARD DAVIES.

February, 1851.

TO BE CONTINUED.

ACKNOWLEDGMENTS DUE.

To S. S. JACKSON, for a very pretty seedling *Azalea*, in full bloom.

Also, for the compliment of applying my name to the choice of all his seedling *Azaleas* the prize plant of 1851—which is remarkable for the size of its truss, with numerous flowers, white with delicate stripes and splashes of pale roses.

But most especially for valuable manuscript notes upon fruits, crops, and rural matters, with full Meteorological Records running back to 1814—a rich legacy to science from his father, who was a close observer, and whose labors will furnish much valuable information that should be preserved. A portion was to have been printed in this number, but has been crowded out:

To S. P. CHASE, and THOS. H. EWING, of the United States Senate, for their kindness in sending me the Patent Office Report of last year, and other public documents:

To M. B. BATEHAM, editor of the *Ohio Cultivator*, for the great favor he has conferred upon me, by so promptly forwarding a copy of the 5th Annual Report of the Ohio State Board of Agriculture, a volume of more than six hundred and eighty pages, which will require some investigation to ascertain its merits. To me, just now, especially valuable for the Report of the Pomological Congress, noticed in this number, and from which extracts will be made in future:

To THOMAS EWBANK, Ex-commissioner of the United States Patent Office, for a liberal

supply of seeds, which shall be distributed and planted.

ACKNOWLEDGMENTS are due to several kind and amiable gentlemen, intimately associated with the periodical and newspaper press, for their many and frequent notices of my undertaking, which they would almost persuade me is *perfect*, were that possible, for my own perceptions tell another tale; and it is best for the interests of the readers, that such a feeling of diffidence should exist as a stimulus to greater efforts in their behalf.

Let the readers now take care of the needful increase of the subscription list—the printing and paper are good, because they are paid for, but will surely depreciate so soon as credit is used in payment;—the artisan is said to be more material than the author, and can not live on glory—an article often considered quite substantial food for the latter class—upon which it is supposed they may easily subsist for a year or two.

Among the many who have thus kindly endeavored to induce the public to support my enterprise, it would be a delicate matter to designate a part; a sample is given in the advertising sheet, and some are so very flattering that it might be considered egotistical to reprint them, even in that way. One of this sort is to be seen in the March Number of the *Wool Grower*, from that generous hearted man, T. C. Peters, of Buffalo, whose valuable periodical, with its varied range of subjects, will be found to interest readers in

every State of our extended and extending Union:

To M. P. WILDER, for his very interesting letter, followed by the printed "Report of Commissioners concerning an Agricultural School," rendered to the Legislature of Massachusetts. The document has just arrived, and appears to be a most valuable work of about one hundred pages, filled with statistics of the agricultural schools of Europe, and showing the efficacy of such institutions, as well as the means and necessity of establishing them in this country.

An early opportunity shall be embraced for analyzing its contents, in full confidence that much may be found therein that will interest and profit the people of the country generally. We certainly need agricultural schools in this country, where rural occupations constitute so important an interest in our economy.

Also, from the same, a Circular, entitled ASSOCIATED AGRICULTURAL CONVENTION, from which it appears that a general meeting was to have been held at Boston, on the 20th ultimo, for the purpose of concerting "measures for their mutual advantage, and for the promotion of the cause of Agricultural Education." May good result therefrom:

To C. S. WILLIAMS, of the "Pathfinder," thanks are returned for the lithographic Rail Road Map of the Western States, which proves a valuable aid to all those who are interested in the vast strides which internal improvements are now making in our whole country, linking the states in bonds of iron. These iron roads will exert a most happy influence in cementing that Union which some persons would so lightly talk of dissevering. May they never live to witness a result so disastrous to all!

A PICTURE OF CINCINNATI, by OTTO ONKEN, the enterprising Lithographer, is decidedly the best I have seen. Always a difficult

subject to execute, this has been unusually successful. It is taken from the mouth of the Licking river opposite, and thus embraces the amphitheater of hills, up the sides of which the city is rapidly progressing. How many of us can remember when they were remarkable for their graceful slopes, covered with velvety green-sward, and shaded with beautiful trees!—now all gone before the ax, the shovel, and the mattock, to give place to houses!—and one day to be the center of the city.

The margin of this large sheet, is ornamented by eighteen miniature drawings, of many of the prominent public buildings that adorn the city.

CHARDON FREE DEMOCRAT. — Thanks are due to the editor of this spirited country paper, for his advertisement of the prospectus which was issued as the Herald of the advent of "THE REVIEW." Has he not received the numbers sent him? if yea—a notice *thereof*, with an appropriate recommendation to his readers, will surely induce some of them to subscribe to the only Horticultural work in the West, and thus greatly oblige its editor, who is determined to reach all who will favor him with their orders. Let it not be said that Geauga county is behind her neighbors in sustaining the civilizing art of gardening.

Notices of Publications.

MANY new books, pamphlets and periodicals are lying on the Editor's table waiting for a favorable introduction, but which must wait another month before room can be made for them in this department of the Review. The limited space allowed, will at present only admit of a brief recapitulation of some of them:

LEUCHARS' TREATISE ON HOT-HOUSES, is a work that should be in the hands of every gentleman who expects to build plant-struct-

tures. It is a valuable treatise, and its leading traits shall be early presented to the reader. For sale by W. H. Moore & Co., Cincinnati.

THE WESTERN WORLD, with illustrations, published by D. C. Hitchcock—graphic sketches of western scenery with pen and pencil; monthly, price 25 cents per number.

THE WORKING FARMER—A. Longett, New York—Vol. III, No. 1, has made its appearance; a valuable paper, which conveys much practical and scientific knowledge to its reader in a capital form. A good time to commence the subscription.

GOODMANS' COUNTERFEIT DETECTOR—one of the first and probably the very best of all this class of money newspapers in the western country, and indispensable to every merchant or other person who handles the cash. It not only describes the counterfeit notes and coins that have been detected in circulation, but contains fac simile impressions of all the coins in the country, and presents a reliable statement of the condition of the market.

TRANSACTIONS of the Massachusetts Horticultural Society, also of the New Haven Hor-

ticultural Society, exhibit the spirited manner in which this delightful art is cherished by our eastern brethren.

The Fruit Growers' Convention, of Ohio, At its adjournment in December, 1849, resolved that its next meeting should be at such time and place as might be selected by the President and Secretary.

Upon them, therefore, will devolve the duty of the selection. The President informs me that he is desirous of ascertaining from those most deeply interested in the subject, their views as to the most suitable place for our next meeting, which he proposes to call in October, thinking that a good period for examining fruits, many of which will have been collected at the several autumnal exhibitions throughout the country, and selections made therefrom.

Communications upon this subject, expressive of the views of fruit growers, and recommending some place for the meeting, will be gladly received by A. H. ERNST, the President. Address, Cincinnati, O.

THE FRONTISPIECE.

THE Leading Illustration designed for this number, was a very pretty picture of a very pretty cottage in the Gothic style, erected by J. F. MELINE, Esq., east of the city, among the river hills, but owing to an unfortunate accident committed by the artiste, it could not be prepared for the engraver in time. Its introduction was, therefore, postponed.

As a substitute, our subscribers will find a specimen of the improved taste that is manifested in the great *Wine Interest* growing up about us. The plain label, badly printed,

upon bad paper, is giving way to the handsome wood-cut illustration of the peculiarities of our Wine region.

This represents the residence of T. H. YEATMAN, one of our most successful wine growers, and is intended for his Catawba wine. The Messrs. CORNEAU have employed the same artist to prepare a beautiful card for their bottles, which, representing a Cornucopia, with abundant fruits of all kinds, not only signifies the land of plenty, but is also a play upon their name. It is, indeed, the name of their vineyard—CORNUCOPIA.

METEOROLOGICAL TABLE.

CINCINNATI, MARCH 1851.

THERMOMETER			WEATHER.			RAIN.	SNOW.	WIND.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.			
1	24	40	clear	clear	clear			light W brisk S W
2	31	45	do	do	do			light S W brisk W high at night
3	22	39	do	do	do			light W
4	38	60	do	do	do			light S brisk S W
5	44	65	do	do	cloudy			calm brisk S high S
6	33	38	snow cl'y	variable	variable		.90	light N W
7	32	42	cloudy	cloudy	cloudy			light N E
8	32	41	clear	clear	do			light S W brisk W high W and N W
9	26	47	do	do	variable			light S W brisk S W high W
10	33	49	do	do	clear			calm light variable and S W
11	42	59	do	do	do			light S W and W calm at night
12	34	54	haze, cl'r	do	do			calm light W calm at evening
13	32	64	do	do	do			calm light W and S W calm at evening
14	37	68	do do	do	do			calm light S calm
15	53	58	fog, rain	rain	drizzle	.75		calm calm calm
16	58	64	cloudy	variable	rain	1.05		calm light S and S E
17	43	51	rain	drizzle	cloudy	.25		light S W and W brisk N W
18	40	45	cloudy	do	do	.10		light N W
19	35	49	clear	variable	clear			light N W
20	33	50	do	clear	do			calm light N W calm
21	30	49	haze cl'y	variable	cloudy			calm calm calm
22	42	47	rain	cloudy	do	.15		light E
23	41	46	cloudy	do	do			light N W variable
24	38	62	clear	clear	clear			calm light W
25	41	70	do	do	do			calm light W and S W calm at night
26	51	77	do	do	do			light S W brisk S W high S calm
27	60	71	haze, cl'r	variable	rain	.45		light S high S light S
28	48	63	do	clear	clear			calm light S W and W calm
29	45	74	do do	do	do			calm light S calm
30	60	77	clear	do	do			light S W
31	62	71	rain	do	do	.90		calm light N W calm

Total rain

2.95— .90

EXPLANATORY.—Calm means when a flag hangs to a staff; Winds classified according to force, into light breezes, brisk breezes, high wind and storm.

Mean temperature of the month.....	47.97
Do do March 1850.....	42.12
Do do do 1849.....	47.90
Do do do 1848.....	44.12
Do do do 1847.....	41.23
Do do do 1846.....	47.69
Do do do 1845.....	47.

Total rain and melted snow..... 3.05

Clear days in the month.....	17
Variable (cloudy at times).....	8
Cloudy (sun not visible).....	6

31

Least high of thermometer on the 3d.....	22°
Greatest do do on the 26th and 30th.....	77°
Range.....	55°
Greatest daily variation on the 13th.....	32°

REMARKS.—The Equinoctial period passed, as usual here, without any peculiar turbulence of the atmosphere, and it will be noticed that although we had a few hours of high winds on five days, there has been no storm in the month. Peaches, Plums, Pears, and some Cherries in blossom—Martins appeared on the 30th, about their usual period.

JOHN LEA.

Univ. of
California





VOL. I.

MAY, 1851.

No. 8.

DOWNING'S COUNTRY HOUSES.

CONCLUDED.

A CHARACTERISTIC is given, by which a cottage may be distinguished from a villa—it is simple and sensible; a cottage being a dwelling in which the household labors can be performed by the family, or with the assistance of not more than one or two servants—while a villa is a country house of such large accommodation, as to require three or more servants.

The happy and refining influences that surround the country houses of those "who in the love of nature hold communion with her visible forms," is pictured with a lover's warmth. It is represented that the villa should be the home of the social virtues, and of the higher intellectual cultivation—that its exterior features should exhibit simplicity, dignity, grace, elaborate elegance, or picturesqueness, corresponding to the habits of the family whose home it is—and harmonizing with the scenery in which it is placed:—its interior to be complete with domestic conveniences, with facilities for social enjoyment—abounding with refining associations, and means for intellectual cultivation. The author enlarges admirably on the kinds of country houses suited to persons of different taste and character—for the man of common sense,

the man of sentiment, the man of imagination, the antiquarian, and the adopted citizen. But what pleases us more than any thing else, is that which treats of *architectural proprieties*, with reference to our institutions, fortunes, and manners—the associations of the hereditary home abroad, and the true meaning of the republican home. If the same noble truthfulness and power, with which the author seeks to level down the apeing pride and false ambition of wealth, had been exercised to "level up" the too low ambition and associations of the mass of agriculturists, no occasion would have been found for some of our preceding remarks.

There is food for reflection in the following quotation—

"And, lastly, we have only to repeat, that the architect will be the most successful, who, after mastering that which has been done in other countries and in past time, works freshly from the inspiration of his own country—its manners, institutions, and climate. Such an artist will absorb the past, as Raphael and Shakespeare absorbed it—not to reproduce it in feeble forms, but to give greater meaning and stronger vitality to productions that belong wholly to the present."

The first villa design is a very plain bracketed country house of wood—quite unpre-

tending, and expressive of homely hospitality. The building would look better in reality than it does in the engraving. The next, is a villa designed by J. Russell West, of Cincinnati, in the Norman style; admirable in proportion, harmonious in its features, and, to our eyes, altogether domestic in expression. The tower (if the building should command a good prospect) would be more useful, and consequently more expressive, if an open observatory occupied the top, instead of the pointed roof; as it may be seen that the row of circular windows are too low to secure a view in more than one direction. The third villa (design XXI) is an elevation in the Italian style; a beautiful building, that would have a still better effect in the perspective. The plan is admirably compact and convenient. The next cut represents a plainer dwelling, in the same style.

Design XXII—is a small villa in the classical style, designed by A. J. Davis, of New York. It is simple, spirited, and elegant; but we can not see how "three or more servants" could find employment in it. Design XXIII, by the same architect, is a cottage-villa in the rural gothic style; a singular blending of a spirited and a lowly expression. Design XXIV, is a "plain timber cottage-villa," with rather a starched attitude. It would probably look better in perspective.

Design XXV—a country house in the pointed style—is our beau ideal of a large country house establishment. Dignity and character were never more appropriately stamped upon a dwelling. A feature we especially admire, is the broad and heavy veranda, which looks as strong and permanent as the house itself, and is in striking contrast to the many summer awning-like verandas that are frequently attached to buildings of the same kind.

Design XXVI.—"A small country house for the Southern States." "A simple, ra-

tional, convenient and economical dwelling," is all that was aimed at in this design, and the aim appears to have been attained.

Design XXVII.—"A villa in the Italian style, designed by Mr. Upjohn, of New York." We know not how to express fully, our admiration of this superlatively elegant villa; we can not find in it a fault, nor imagine an improvement. It is essentially a *suburban* villa—not a *country* house—as will be perceived, at once, on comparing it with design XXV. No estimate of the cost is given, but we think it could not have been far from \$12,000.

Design XXVIII.—"A Villa in the rural Gothic style." The author thus fully expresses the character of this design, in describing what he *intended* to express:—"We have designed this villa to express the life of a family of refined and cultivated taste, full of home feeling, love for the country, and enjoyment of the rural and beautiful in nature." It is a rural gem, differing materially from design XXV—being more elegant and ornate, but expressing less proprietary dignity. It is just such a place as one imagines should be the home of Mr. Downing.

Design XXIX.—"An American country house of the first class, by Gervasse Wheeler, of Philadelphia." A bold, uninteresting, un-American-like mansion, with very complete plans. Estimate, \$13,000

Design XXX.—"A Villa in the pointed style, by A. J. Davis." An ornate villa of the first class—picturesque, but not fantastic—with a plan arranged for a magnificent show of apartments, and for great entertainments. We remember to have seen but one plan equal to it in this respect—the residence of Joel Rathbone, near Albany, by the same architect. Estimate, \$10,000.

Design XXXI.—"A lake or river Villa, for a picturesque site." One of the most loveable, and home-like, and truthfully Ame-

rican adaptations of European architecture that we have ever seen. But we differ entirely with the author, in thinking it peculiarly and *only* adapted to highly picturesque scenery. It appears to us to be emphatically a *country* house, and appropriate in the midst of fine trees, in smooth scenery, as well as upon the bank of some picturesque stream. We are reminded, however, by a hemlock thrown in at the right of the picture, that the curved roof harmonizes happily with the forms of many evergreens that usually grow in mountains;—but Mr. Downing, in his warm exhortations to plant such evergreens as the Norway Spruce, the Cedar, Hemlock, etc., has not limited the places of their appropriateness to mountain or picturesque scenery, but has referred to the smooth parks of England, as the home of their highest glory. Surely, this charming style of domestic architecture, ought not to be too exclusive to bear them company there.

Design XXXII.—“A Villa in the romantic style, for the middle and southern states.” A grand style; here illustrated by an extensive country house, which is chiefly expressive of dignity, and proprietary wealth. This is the last architectural design of the work.

The next chapter is devoted to the interior finishing of country houses—urges the impropriety of elaborate decoration in cottages; the propriety of a correspondence between the exterior style and interior finish—with hints on the treatment of wood-work; of walls: whitewashing, papering, simple cornices: ornaments in simple cottages; carpets and floors; window curtains; roller-blinds; villa interiors; difference between architectural style and fashion; principles of decoration; peculiarities of the various styles; proportions of rooms: and hints on general details. Of the wood-work for cottage interiors, the author remarks—

“The most satisfactory wood-work or wainscot, for the interior of a cottage, is that composed of the native wood of the district where the house is built—such as maple, birch, ash, black walnut, or oak. This requires no painting, simply a coat of varnish, and the effect is excellent. But, in most cases, the extra cost of working hard wood, will render its employment rare in economical cottages. As a substitute, however, we would strongly recommend that the wood-work be either grained, in imitation of these woods, or, in the cheaper cottages, *stained*, to have the same effect.”

Excepting, with all our might, the somber black walnut, we heartily join in recommending the above list of native woods, and add to it another, the beauties of which the author can not know, or it would have been among the first named: we mean the butternut. It more nearly resembles the mahogany than any other of our native woods—is soft, and easily worked—takes a good polish, and is (I am informed by those who have had experience with it) even less liable to shrink and swell, with changes of the atmosphere, than pine. The author's suggestion to *stain* such soft woods as pine, or whitewood, to imitate oak, or black walnut, with all due deference, appears to us absurd. Putting black walnut out of the question, we maintain that pine, varnished, has a more mellow rich, and cheerful tone for cottages, than *genuine* oak—how much more appropriate than an *imitation*, we leave to Mr. Downing. Whitewood, too, though it has not quite so mellow a hue as pine, often produces a beautiful effect in furniture, and where used for cottage interiors, ought not to be disguised.

Concerning the arrangements of colors, in the different parts of a room, the author observes:

“The best effect in rooms of small size, or indeed of any size, is produced by having the

ceiling lightest, the side walls a little darker, the wood-work a shade darker still, and the carpet darkest of all."

For walls, both of cottages and villas of moderate extent, the author considers papering, with tasteful and appropriate patterns, the most available and satisfactory mode of finishing and adorning.

We regret that space will not permit copious extracts to be given from the admirable opening pages of the chapter on furniture. It is illustrated by a great number of engrav-

ings, representing furniture of nearly every style, and is, altogether, one of the most interesting chapters in the work.

The last section is upon warming and ventilating, and worthily concludes one of the most complete works that has emanated from the American press; and which, it is to be hoped, will soon find its way into the hands of all who desire to learn the arts by which *home* is rendered loveable. F. J. S.

Toledo, O.

MITCHAM. WILD OR SQUIRTING CUCUMBER.

We know of but two places in England where the wild cucumber (*Mormordica Elaterium*, Linn.) is cultivated for commercial purposes; these are Mitcham, in Surrey, and Ampthill, in Bedfordshire. The London market is chiefly supplied from the former place.

This plant is a native of the south of Europe, but flourishes well by cultivation in this country. It is essentially an annual, but Mr. Arthur, of Mitcham, assures us that if the roots be covered up during the winter, the plants survive through several seasons, and he has now some which have lived three or four years. So that it would appear that, if carefully protected from the winter cold, its life is prolonged, and from an annual the plant becomes a perennial.

The seeds are usually sown about March, and the seedlings planted out about June. A considerable number of the Mitcham plants are self-sown. When they grow very large and free, the stem becomes extraordinarily broad and flat. We now have one before us, whose stem, as it issues from the earth, is round, and about as thick as the forefinger; but it gradually becomes flat and larger, until at its broadest part it is nearly four inches wide, and half an inch thick.

A wet season is injurious to the fructification of this plant.

The only part of the plant which is of use is the fruit, which, as is well known, is remarkable for bursting when ripe, and expelling its seeds with a portion of its juice with great violence, to a considerable distance—(some say as far as eighteen or twenty yards)

—whence the name of the plant—the squirting cucumber. The fruits, which have arrived at maturity, are of a yellowish green color; and the slightest touch at this period will disengage the fruit from its footstalks, and cause the violent expulsion of the seeds. It is, in fact, dangerous to walk among the plants at this period; for painful irritation of the eyes is sometimes produced by the contact of the juice with the conjunctiva.

The cultivators of the plant, at Mitcham, sell the cucumbers by the bushel; each bushel contains forty pounds, and the price ranges from 7s. to 10s. Forty-five years ago, the price charged to the Apothecaries' Company, was only 2s. the bushel. In 1820, Dr. Clutterbuck states that half a bushel of the fruits cost half a guinea in the market.

Elaterium is manufactured from the cucumbers in London, at Mitcham, and at Ampthill. At the time we made our visit to the Mitcham physic gardens, (September 3,) the manufacture of elaterium had scarcely commenced. Some of the fruits had been gathered; but the chief manufacture of elaterium was expected to commence about the 9th or 10th of September. The plants, at the time of our visit, bore numerous fruits, and were still flowering.

The manufacture of elaterium, as practiced at Mitcham, may be divided into four stages, or operations, 1st—Washing and slicing the fruits; 2d, Expressing the juice; 3d, Straining the juice and setting it aside to deposit; 4th, The collection and desiccation of the deposit called Elaterium.

SELECTING FRUIT FOR A CONTINUED SUPPLY.

THERE are two reasons why home-raised fruit is better than that purchased in market. First, fully ripe fruit, plump with melting richness, may be taken fresh from the tree for immediate use, instead of being plucked while yet hard for two or three days of carriage and exposure in market. Secondly, where fruit is raised in one's own garden, the tenderest and most delicious may be selected; while that which is to be offered in market is usually of such sorts as have a showy exterior, or yield the largest crops. Every man, therefore, who possesses a rood of land should endeavor, as far as possible, to furnish his own table. There can scarcely be conceived a better combination of the elements of comfort, independence and economy, than in a succession of the very best home-grown fresh fruit for the use of a family, for the twelve months of the year.

In selecting the varieties, there are several considerations to be borne in mind. 1. As a general rule, it is safest to adhere to the sorts which prove best with best cultivators in each particular region. New and unproved sorts, no matter how highly they may be recommended, should be introduced sparingly. 2. A supply may be relied on at all times and through all seasons with greater certainty by a rather extensive than meager list. Some fruits succeed best in one season, and others in other seasons. For example, in one year nearly all the early cherries rotted but the Kentish, which in other years was passed as second rate. We had the past summer three fine sorts of early peaches ripening at about the same period, viz: Fay's Early Ann, the Tillotson, and Serrate Early York. The two latter bore but few specimens; the former by a profuse crop supplied the deficiency. One year may be noted for its abundant crop of strawberries, another for its bountiful supply of raspberries, a third for its grapes, and a fourth for its pears. Hence, a wide selection, provided the very best are taken, will prove most satisfactory.

We have repeatedly given select lists of fruits in former numbers of the Cultivator. It may perhaps be interesting here to mention only a few of the best or most noted for particular purposes. The season of fruit begins in the Northern States, by the first of summer, with cherries and strawberries. The

earliest strawberries, really worth raising, are Large Early Scarlet, Burr's New Pine, and Boston Pine; the later sorts are Old Hudson, Hovey's Seedling, and Dundee. The earliest cherries are Early Purple Guigne and the Doctor; the later are Elton, Downton, and Downer's late. Holland Bigarreau and Black Tartarian are fine cherries, and also productive for market. Belle Magnifique and Plumstone Morello are excellent late cherries. These two sorts coming in this year after the rotting season, were beautiful, sound and perfect. Apricots, ripening by midsummer, immediately follow cherries. Unless they are planted on a soil with a naturally dry or well drained subsoil, they are liable to perish long before reaching old age. Low heads are thought best, but are not proof against this disaster. The hardiest apricot, not of the highest quality, but well-worth raising, and as hardy as a sugar maple, is the Black. Of the others, the Golden or Fishkill, and the Breda, are the most reliable. The Large Early, and the Moorpark, are less certain and less productive, although of fine quality and large size.

The Primordian plum, a rather tender and slowly growing variety, but profusely productive, ripens with the earliest apricots, and is for this reason very valuable. Early Royal and Imperial Ottoman succeed the Primordian, the Green Gage, and Lawrence Favorite: these are followed by Washington and Jefferson; Purple Gage is rather late, and the Frost Gage quite late, and a profuse bearing, market variety. The Lombard or Bleecker's Red and the Imperial Gage are well adapted to light soils. Coe's Golden Drop is a fine large, late sort, not always ripening at the North.

The three best very early peaches we have already mentioned. They are followed successively by Cole's Early Red, Coolidge's Favorite, Large Early York, George IV, Crawford's Early, Morris White, Nivette, Oldmixon Free, and Crawford's Late.

The best early pear is the Madeleine. Afterward we have those delicious summer varieties, the Rostiezer and Tyson; then the Bartlett and Washington, both free growers, and great and early bearers; these are succeeded by the Seckel, unequalled for high flavor, Louise Bonne of Jersey, unsu-

productiveness, and by the Flemish Beauty, remarkable for its free growth, large size, and fine quality. The White and Grey Doyenné, on soils adapted to them, are scarcely equalled among late autumn pears. Among late autumn and early winter sorts, the Aremberg, Winkfield, and Winter Nelis are regarded generally as the best. The Easter Beurré, if fully ripened and well kept, is a very desirable late winter and spring pear. The new variety, the Autumn Paradise, is likely to prove a pear of great value for mid-autumn. Onondaga or Swan's Orange, and Beurré Diel, as well as Bartlett, Flemish Beauty, and Winkfield, are desirable for market, from their size and beauty, to which may be added the Golden Bilboa, although but little above medium in size.

It is scarcely necessary to point out those varieties of the apple which will give us fresh fruit through autumn and winter, and till the early summer fruits appear.

EDITORIAL REMARKS.

This list of fruits, taken from the Albany Cultivator, was furnished by the accomplished pomologist J. J. Thomas, of Macedon, N. Y., whose opinion is highly valued;—his list of Strawberries would be considered defective here, where the "theory" is so well understood and practiced.

In a private communication to the President of our Horticultural Society, he thus acknowledges the receipt of a box of fruit sent him from the last autumnal exhibition:

"I was pleased with their large size, fine appearance, and excellent quality. The Newtown Pippins were of *better flavor* than here, in Lat. 43°. The Pryor's Red, although a fine apple in Western New York, is by no means equal to the specimens sent me. The Broadwell succeeds well here as with you."

STRAWBERRIES.

MR. EDITOR:—We do our utmost to keep up with our Eastern brethren, but in vain. They out go us as far in Horticulture, as they do in Mesmerism. Our horticulturists, who believe in the *shaking process*, to prevent the ravages of the Curculio, where they shook the tree several times during the day, could only insure a few plums. And the only successful operator, was Mr. Shoenberger, who tied his dogs to a tree, turn about, and kept up a constant shaking from daylight till dark. A correspondent of the Horticulturist for this month, succeeds better. He shakes the tree but three or four times per week, and the insect never troubles him. It seems the true secret is, that he "catches all the he ones, and shortens the proboscis." True, he tells us that the "insect is migratory and fleet of wing, and their presence not confined to plum trees." The most any of our horticulturists contend for, is, that a pavement secures safety, where the trees are near the house, because the insect is timid, and has a natural instinct

that teaches him not to deposit his eggs where a pavement below the fruit will prevent the young from obtaining winter quarters in the ground. But in New York, the insect can talk, reason, and avoid unexpected changes. He learns this "proboscis manipulation" from his neighbors. The news spreads, and these "migratory insects" avoid the premises, and save their noses. This correspondent pronounces the "paving process a failure, and trees to overhang water, an absurdity." Perhaps a few years experience may lead this writer to change his views. For it seems that until recently, his "gardening for fruits, flowers, vinery, and conservatory, have occupied but a few perches of land." In our new country, in our backwoods, we know there are gardens containing many acres, where plum trees near houses, that have ample pavements below, have not for twenty-five years had the crop destroyed by the Curculio—whilst trees scattered through the garden, have not perfect fruit more than one

year in twelve. The hanging of trees over the water, is an eastern discovery, and we can not vouch for it. But the instinct principle indorses it.

I find some eastern Horticulturists, following in the footsteps of the great botanists of Europe, still repudiate the backwoods principle, that Hovey's seedling, and other plants of that character, will not, without impregnation from staminate or hermaphrodites, produce a single perfect fruit. I am not surprised at this. For even their justly celebrated file leader, Mr. Downing, has not yet become satisfied of his error, when he said that with him, Hovey's pistillate seedling had become staminate by running. The sexual character never changes. I have heretofore believed that a large fruited plant, perfect in both organs, could not be raised from seed. I inferred this, as in England they cultivate hermaphrodites only, and yet their most famous plant, Keen's seedling, will not with us average one fifth of a crop of perfect fruit. Yet my tenant, Mr. Schneicke, in the garden of Eden, among some thousands of seedlings, raised one plant that for three years has produced a full crop of extra large, perfect fruit. His success may be owing to his locality being in *the garden of Eden*. I now have a seedling in blossom, that promises to equal, if not surpass, that from Eden. When the blossom first expanded, it appeared to be purely pistillate, and from the size of the fruit bud, promised to yield a fruit of extra size. In a few hours the stamens appeared, and the male organs also appear to be perfect, but not in a form like too many of our females, lording it over the would be lords of creation, but as a gentle, quiet bed-fellow, yielding with great gallantry, the largest portion of the bed to his better half.

There are a few plants bearing both pistillate and hermaphrodite blossoms, and yielding a fair crop of fruit, but many of the blossoms

partially or wholly defective in the pistils, and the fruit of small size. This is the character of the Duke of Kent, and the Bee Hive, of which we have heard so much. These are both from Europe. As soon as the Horticulturists of Europe discard their doctrines of this plant, and place their faith on our illiterate strawberry grower, Mrs. Abigurt, through whom I first learned the true character of the strawberry plant, we shall hear no more of the Duke of Kent, Bee Hive, or even the world renowned Keen's Seedling.

Yours, N. LONGWORTH.

Cincinnati, April 3d, 1851.

P. S. Never use a pistillate for forcing. Even if placed close to a plant perfect in male organs, it will bear no fruit, as there are no bees, flies, and other insects, to carry the farina. As strawberries are extensively forced in England, I doubt not that this is the principal reason why hermaphrodites are so extensively cultivated. Mr. Keen found one of his new seedlings barren, and traced the cause to the want of perfect stamens, and caused them to bear fruit, by placing his old seedlings in proximity. He reported the fact to the Horticultural Society, and it is somewhat singular that it did not lead them to investigate the subject, and discover that the strawberry, though belonging to a class of plants always having male and female organs in the same blossom—yet in their wild state, and in raising from seed, that three plants distinct in sexual character are produced. Plants wholly imperfect in the male organ. Plants wholly defective in the female organ: and a few perfect in the male, and partially perfect in the female organ also. There is one of a fourth character occasionally produced, with some blossoms defective in male organs, some defective in the female organs, and a portion more or less perfect in both.

N. L.

BUDDED AND SEEDLING PEACHES.

Hamilton, Co., O., March 20, 1851.

MR. EDITOR:—I was much pleased with the remarks of your correspondent in your third number, respecting "Budded Peaches," and with the experience of your correspondent from Clermont county, in the fourth number. But in your fifth Number, Mr. Springer gives us quite an opposite opinion, and thinks that the subject was fully decided by the fruit convention, in 1849. Now, if this learned body have decided the question, I suppose that it will be considered presumption in me, to lay my views before your readers. However, for the benefit of those who desire good peaches, I will relate my experience. In the spring of 1843, I purchased a farm near your city, and as there were no fruit trees on the place, I concluded to plant some at once, that no time should be lost. I intended to plant two acres, but as I could not conveniently get it ready, I planted only half the field that spring—(the land facing the northwest, and clay soil.) I procured some of the best sorts I could get at Cincinnati, such as Downing had recommended. I took special pains in planting, cultivating, etc.; nearly all grew, and looked well pleased with their new home and treatment. Some time early in the fall, I was showing a neighbor my success, and the fine list of names, when, to my astonishment, he pronounced all a failure, and spoke as if it was quite a settled thing, that budded trees would produce no fruit. They were too delicate to stand our winters, and that ever since people had planted budded trees, the peach crop had proved a failure: and that he had got a large quantity of fruit that same season, all natural; that he would not plant budded trees if given him.

I had read in some Agricultural work, that the best plan to get good natural fruit, was to select the stones from the best fruit. I

felt half inclined to dig up all my trees that were looking so well, and in their place plant some stones from choice peaches. Under this idea, I visited my friend to see if I could make a selection, but the only peaches I could find, were what I believe are called Hog peaches—at any rate, that would not be a bad name for them. I thought I would see what I could do in the city; with two dollars I purchased half a bushel of different sorts of fine fruit, well selected. The same fall I prepared my ground, and the following spring I planted the remainder of my field with the choice seed—and now for the result. For several years my peaches got killed in the bud; but then it was one of those "extraordinary seasons" so common in this country. It was useless to complain, although disappointed; still I lived in hopes that when my natural trees got a little older, that they at least would not disappoint me. I plowed, pruned, and manured my orchard, until my patience was almost exhausted, and I felt half inclined to cut all down. One day an experienced English gardener was admiring the beauty of my trees, when I told him that was the only merit they possessed. He inquired if I did not cultivate the land late in the season. I said that I had always made it a practice to plow the land as soon after harvest as convenient. He concluded that this was one of the principal reasons of my failure, as it contributed to swell the fruit buds, and consequently made them more liable to be destroyed by the frosts. He also concluded that I had manured too much. The following summer I sowed my orchard with Buckwheat, thinking to take a little fire out of the land; that same fall (1849) I had the pleasure of gathering a few peaches, for the first time from some of my budded trees, and last season I believe nearly or quite all my

trees were loaded with fruit—though several of the natural trees lost the whole of their fruit by rot, but only one of the budded trees.

I had over one hundred trees of natural fruit, and out of the whole there were only three trees that were worth retaining, and two of these were yellow flesh. If I am informed correctly, it is a peculiarity of that family to reproduce their like. With regard to my budded trees, I had some of the most delicious and fine peaches you can imagine; they were often pronounced by your citizens the best in the market, and you know, Mr. Editor, that one bushel of good peaches are worth four of the common sort in the city, to say nothing of the ready sale of the one compared with the other. My friend's trees, alluded to in the former part of my letter, forgot to bear in those "peculiar seasons" as well as mine.

Mr. Springer has quoted some remarks of Dr. Kirtland—after which he says, first—

"That budding has a tendency to alter the character of the tree to some extent. See for instance, what small petals or blossom leaves the budded varieties in *general* have. If budding does not occasion this, what does?"

This may be well enough to direct attention to, but it proves nothing—unless it can be shown that the petals of any one sort decrease in size by budding. I have generally been able to judge of the size of the peach by its petal; it would be absurd to say that this was a proof of degeneracy, when nearly all of the superior sorts, either natural or budded, have this peculiarity. "But still," he says, "that budding can have but *small share* in producing the barrenness of which we complain," etc.

Second, "Over-stimulation of the trees by extra culture, will, no doubt, impair their bearing qualities, etc.; and it is a very common practice, when men plant choice fruit, to give it extra attention."

Here, I believe with him, is one of the principal causes of failure; and another and more difficult one to contend with, is our

"*peculiar situation.*" We are situated on the battle ground where "the warm breezes of the Mississippi Valley" contend for the mastery with "the chilling blasts from the northern lakes;" and often in the month of January, we have summer heat, while frequently in February, the weather changes to zero, and in "*peculiar seasons,*" it reaches ten or twelve degrees below that point which destroys the fruit buds of the peach; this is the greatest difficulty I have to contend with. If budded trees have smaller petals than natural fruit of good quality, the suggestion may be worth attending to; or if the shy bearers have smaller petals than those budded trees of a more prolific character, I shall say with him, "still open to light." I hope to take particular notice of the petals this season, as my trees at present look favorably, and may again trouble you with my remarks.

I shall not again be easily persuaded to try natural fruit, but hope to select from the very best fruit I can get, raised from this locality, or elsewhere, and leave the raising of new varieties to the curious.

Yours, etc.

ELECTIVE.

REMARKS.—Right glad that *Elective* promises to observe the character of the blossoms, which will be noticed by many this year:—let us have well attested facts, and they will be worth the finest theories in the world. It is a well known fact, that certain families of peaches have short petals as a permanent character—a peculiarity as well fixed as the glands or serratures of the leaves, the shape of the stone, or any other distinction; and is a peculiarity inherent in the individual tree in each case—not the result of budding, starving, or stimulation. This is well set forth by Mr. Thomas, in his excellent book of *Fruits*. Observe for yourselves, however—there is nothing like personal ocular demonstration, and send in the results at the end of the season.—ED.

WILD FLOWER CALENDAR.

MARCH.

Erigenia bulbosa, Nuttall. This beautiful little plant seldom exceeds four or five inches in height—with us it blooms about the first week in March—it flowers in an umbel, the petals are pure white—others reddish brown. It is plentiful about Cincinnati in warm sheltered spots, growing in rich vegetable mold. The root is a small round tuber, said to be sought out by the wild turkeys: hence the vulgar name, turkey pea. Synonyms—*Hydrocotyle composita*, Pursh. *H. ambigua*.

Erythronium albidum, Nuttall. The dog-tooth violet, flowers here about the middle of March—is common all around Cincinnati, both along the alluvial bottoms and on the slopes of our hills. The *E. Americanum* or Yellow Dog tooth violet is not quite so common, and is about two weeks later in flowering than the white. There is said to be but one species of this beautiful plant known out of the United States. The root is tuberous.

Viola cucullata, Willdenow. The blue violet is very common in rich soil and sheltered situations. It flowers from about the 20th of March, and continues flowering all summer—seeds extremely numerous—it is much easier to introduce it into a garden than to eradicate it afterwards. The petals are blue—the seeds are matured under or close upon the surface of the ground.

Viola striata, Aiton. Flowers white, striped with yellow—common every where—blooms at the same time as the *cucullata*, but has a branching stem.

Hepatica triloba, Chaix. Flowers about the 1st of March—it used to be plentiful at Taylor's mill-dam, near Newport, Ky., also on Rapid Run and a little north of Spring Grove Cemetery.

Phlox divaricata. In open woods—blooms about the middle of March. Flowers purplish, of varying tints and sometimes white, quite ornamental.

Claytonia virginica, Linn. This is abundant and well known as Spring Beauty—the petals are reddish white—blooms about the 1st of March.

Pulmonaria virginica, Linn. Is a very ornamental plant—abundant in alluvial soil all around Cincinnati. Flowers about the middle of March, are a lovely blue, and the foliage is luxuriant.

Mitella diphylla, Linn. Is found plentiful on conglomerate rocks along with *Asplenium rhizophyllum*, some two miles above the mouth of the Little Miami—six or eight inches high. The flowers are white.

Caltha palustris, Linn., or Marsh Marygold, has

numerous large bright yellow flowers. It is found about springs on the borders of marshes on John Ludlow's farm, plenty.

APRIL.

Sanguinaria canadensis, Linn. Bloodroot—flowers about the 1st of April—grows in rich vegetable mold in open woods. It was called by the Indians Puccoon, and is supposed to have been used by them as a paint—its juice is red.

Jeffersonia diphylla, Barton. Flowers 1st of April—petals white—seed vessels very singular, being covered with a lid like an old fashioned snuff box.

Anemone thalictroides, Linn. Is very common in the woods about the city. Flowers early in April—the petals are white when fully expanded, but open gradually with a lovely pink tint.

Dentaria laciniata, Linn. Is very common—its flowers are white, and appear in the beginning of April—the *Dentaria diphylla* blooms two weeks later.

Arabis rhomboides, Persoon. Is white—its time of flowering is in the beginning of April—common in meadows and bottoms.

Corydalis aurea, Willd. Bright yellow—April.

Corydalis cucullata, or Dutchman's Breeches. April, flowers white with yellow—in open woods in rich soil. Boek proposed the name of *Dielytra*—DeCandolle that of *Dielytra*—Another species, *canadensis*, has pink on the flowers and is fragrant.

Cypripedium pubescens. Yellow ladies slipper, used to grow west of Millcreek, plentifully, also in Clarkson's woods as well as on all the high grounds opposite the city in Kentucky—it flowers about the end of April.

Delphinium tricornis, Mich. Rich purple—flowers in April from the first week to the end.

Draba verna, Willd. Whitlow grass; flowers white, about three inches high—beginning of April very abundant between Sixth and Seventh streets, a little east of Freeman street.

Hydrastis canadensis. Yellow root, yellow Puccoon—flowers white, coming out before the leaves are fully expanded, but soon fall off. It grows eight to ten inches high, fruit something like a strawberry—common in damp woods, north of Cumminsville, etc.

Floerkea proserpinacoides, Willd. *F. uliginosa*, Muhl. False mermaid—on the hills west of Millcreek opposite the old corporation line.

Phacelia bipinnatifida, Mich. Blue—grows on the hills below the city, also on the Kentucky hills

opposite Western Row—flowers generally before the 15th of April.

Phacelia fimbriata, Mich. Is in flower about the end of April—a very beautiful thing which was named by the girls among the early settlers, Miami Mist, on account of the delicately fringed edge of the pale blue petals.

Ursaria triloba, Linn. *Porcelia triloba*, Pursh. Papaw or custard apple. Flower, a dark purple, almost black, a shrub, bearing a rich fruit in September.

Ranunculus repens. Millcreek bottoms—plentiful.

Ranunculus abortivus. Woods and fields, common.

Thalictrum dioicum. White—flowers in April—open woods, among rocks.

Saxifraga virginensis, Mich. Flowers white, about five or six inches high—used to be very plentiful on Mount Adams—last time I looked there I

could not find any, even with the aid of the great telescope; it is banished to more retired spots along the river cliffs.

Trillium sessile, Linn. Every where.

Uvularia grandiflora, Smith. Large flowered bell-wort—a beautiful plant worth cultivating—grows a foot or more high—flowers pale yellow—nodding and very graceful.

Meconopsis diphylla, De C. *Stylephorum diphyllum*, Nutt. *Chelidonium*. Flowers large, yellow—among rocks in close woody hill sides—this and the preceding bear cultivation well and are truly worthy of care; the *Meconopsis* will continue to bloom through the summer if cut off.

Isophyrum biternatum, Linn. *Enemion*, Raf. Dry woods—common—flowers white—time, middle of April.

HOW TO MISMANAGE A GARDEN. MANURE.

It would be a great injustice to mismanagement, if it were limited to withholding manure. The possession of that article is often as useful to the mismanager as the want of it.

A man who has nothing but good management to recommend him, takes many precautions to secure manure in different states, and to apply it in a particular manner. He has his strong manure for cabbages and asparagus, his mild manure for flowering plants, his liquid manure for little delicate creatures. He attaches importance to the time when it is applied, and the manure, and the quantity. Nothing can be more fanciful than his mode of dealing with it; if he has a tap-rooted crop to bring on, he puts it deep in the trench under the seed; if he has a leaf crop, he lightly forks it in.

A mismanaging genius despises all this; he finds no occasion for distinguishing what is strong from what is weak, manure is manure, and what is good for a rose is good for a geranium. As for the time of using it, why, any time will do; if too late, it will do the plants no harm to wait; if too soon, at all events it is ready for them when they do want it. "Manure can't be wasted"—that is his maxim. It may as well be in the soil as any where else; and that is true—for if a crop is not ready to feed upon it, it is pretty certain that weeds enough will spring up to assist in its consumption.

Of all the "fancies" which the mismanager despises most, is that of putting manure into the bottom of trenches under the seed of tap-rooted plants; for how is manure to do the seed any good, if so far away from it? The mismanager, therefore, puts it on the top; a plan which among other merits has this, that you can see it, and see what becomes of it.

It is true that the genius generally finds his carrots and parsnips all forks and fibers, while the manager has roots as strait and as long as a foot rule; but then it is not the way of manuring that makes the difference; it is all the fault of the soil.

A dull witted gardener, who uses liquid manure, gives it to his plants day by day, as they grow, a little at a time, and very weak; it is astonishing how much trouble he takes with his patients; one would think that he was feeding his children. The bold practitioner, on the other hand, proud of his mismanagement, drenches his plants with "good strong stuff;" one watering is enough for him; and pretty often enough for his plants—unless, indeed, he administers it when they are at rest—and then may be it will be washed away from the roots before it can do any harm, especially if the plants are in pots.

In no department of his art does the talent of another sort of mismanager appear more conspicuous, than in his application of manure. He finds it gives greenness and vigor

to his vines and pear trees; he sees his yellow lawn speedily darkened by its invigorating influence; and he infers that so likewise his pallid Conifers, cramped in pots, or steeped in a bog, will soon be restored to the bright green color for which they are valued. It happens, indeed, that they become yellower than before, and probably die outright; but it can not be the manure that did it; some good-for-nothing fellow has poisoned the trees.

But the triumph of skill, with the mismanager, is his preparation of his manure. He gets stable litter, and throws it in a heap, treads it well, and leaves it till its inside is as full of ashes as an apple of Sodom; he lets it heat well, to dry the rankness out, and leaves it exposed to rain, in order that it may be kept well together; he cuts a trench round it, to drain off the water; and when at last he has a pile of nice black, scentless matter, his operation is perfect. It has been observed, indeed, that in gardens where this kind of manure is employed, the crops are not nearly so good as in places where another system is followed; but that is evidently because of the hungry soil which the mismanager has to work. He takes credit to himself, for getting something in such a place; and well he may, all things considered.

In purchasing ready-made manure, a genius is still conspicuous. To strengthen that which is home-made, in the manner described, it is advisable to buy some guano, a capital material, which seems to suit all sorts of crops. But it is so troublesome to send to the country town for it, the penny post is so expensive, that he puts off ordering it till the season is well nigh gone. By great good luck, a very respectable gentleman gives the genius a call, for the express purpose of saying that he has bought a lot of guano at a railway station close by; price very low, the quality capital—the sample is beautiful; it is not half so strong smelling as what his neighbor bought at twice the price. Of course, the mismanager, eager to save his master's money, and his own trouble, makes a bargain with the civil gentleman, and is supplied on the spot. Some how or other, however, it turns out that guano does not do much good; it is plain that it doesn't suit his land, and he sagely determines to have no more of it. As for the garden on the other side the road, where such an amazing crop of beets was had where the guano was put on, that is no rule; because every thing seems, some how, to grow well there.

K.

Gardeners' Chron.

BORDER PLANTS.

A Descriptive List of Greenhouse Shrubs, suitable for Border Planting in the Western and South-western States.

DR WARDER: As the season for preparing borders, and bedding-out flowering plants and shrubs, is once more with us, I have thought it a proper time to communicate through the Review, the result of some years' experience in the selection and management of a list of plants that may make the garden, parterre, or flower border, a brilliant and pleasing source of interesting beauty throughout the summer.

Persons who have only seen many of the varieties of greenhouse shrubs or plants in pots, in which they are mostly sold by the cultivators, would scarcely conceive and hardly

recognize their old acquaintances in their changed appearance when growing in a genial soil in the open border; and those which I shall recommend are of the easiest culture, and require the simplest management.

Abutilon striatum; this is a very graceful, free-flowering shrub, growing from six to eight feet high, its delicate bell-shaped flowers of a lively orange color, hanging pendent from the axils of every leaf. *A. venosum*, is a variety lately introduced into our collections, and is a decided improvement on the preceding, being a more vigorous grower; palmate leaves of a deep green,—flowers more than double the size of the former, and much higher color; these keep well in a cellar during the winter.

Asclepias curasavica; this is a very pretty ornament to the flower border, blooming the whole summer; flowers of a bright orange color, but requiring to be housed before frost.

Bouvardia triphylla, is another very pretty object in the borders, bearing its neat coral colored, tube shaped flowers in corymbs, blooming the whole summer, but must be raised before frost.

Brugmansia suaveolens, formerly *Datura arborea*, is a noble object in the center of a bed not less than eight or ten feet wide, bearing its large, handsome, double flowers of the purest white, and in the summer evening exhaling its delicate, jessamine-like odor for a considerable distance around.

Erythrina crista galli, the coral plant, when of good size is a magnificent object, throwing in every direction its handsome limbs, terminating with spikes of beautiful pea shaped blossoms, of the richest dark crimson color.

Heliotropium peruvianum and its varieties of *H. intermedia*, *Voltaireanum*, *grandiflorum*, and *Souvenir de Liege*, are universal favorites wherever known; the last three are recent additions to the family. *Voltaireanum* is a dark purplish blue color, of rather slender growth, highly fragrant, and entirely distinct. *Souvenir de Liege* was sent out to us last year, with its high sounding title, as a new yellow variety, but the yellow will be found only in the imagination of the importer; it is notwithstanding, a decided acquisition, differing in color very little from our old favorite *peruvianum*, but of much more robust and vigorous habit of growth and very delicate odor, combining the sweet perfume of the *Alyssum*, with the almond fragrance of the old *peruvianum*; it flowers also in much larger trusses.

Hibiscus sinensis. All the varieties of this family are beautiful shrubs, foliage of an intense green color, and large, showy, scarlet flowers. *H. Hoffnerius* is a strikingly hand-

some plant, bearing large single flowers of a brilliant scarlet color, with a distinct star-like center, of a darker hue; raised from seed, brought from the island of Cuba by Mrs. J. Hoffner, after whom it was named. *H. rosea* is a delicate rose color; these are all very impatient of frost.

Lagerstroemia indica, the crape myrtle, a beautiful shrub, standing our winters with the slightest protection, simply binding some straw or mats around them, or what is less trouble, may be dug up in the fall and kept in a cellar through the winter and planted out again early in the spring.

Lantana; the few varieties of these species we already possess, are among our finest summer flowering plants; we are pleased to see some of our patrons and amateurs turning their attention to the raising of new varieties from seed. *L. mutabilis*, of a changeable orange color, *L. fucata*, a pinky lilac, and *Sellowii*, similar in color to the preceding but dwarfer habit, are all fine, free flowering shrubs, blooming profusely the whole summer.

L. mutabilis major, is a new variety recently introduced, and is decidedly the finest of the family that has fallen under our observation; flowers of a bright orange color, similar to the old *mutabilis* but much larger and more persistent; neat foliage, fine habit of growth, and flowers profusely the whole summer.

L. Ewingii is a new variety, raised from seed by Mrs. A. H. Ewing, after whom it was named by the Cincinnati Horticultural Society. It is very distinct in color from any other variety in cultivation that we are acquainted with, being of a delicate French white, a profuse bloomer, neat habit of growth, and altogether it is one of the prettiest acquisitions to our summer blooming plants, and deserving of extensive dissemination.

Musa; the banana plant, in its varieties are strikingly handsome objects when planted in

the open air, producing leaves from two to four feet long, of a rich, luxuriant appearance, giving quite a tropical air to the spot; its flowers are also singularly produced, of a delicate rose color. I have one in blossom now, 7th of April, which commenced blooming early in January.

Nerium splendens; the Oleander, is a very handsome shrub planted out in summer, displaying its large trusses of rich, rose-colored flowers in much greater profusion than when kept in pots or tubs.

N. ragonot is a pretty variety, bearing flowers of a rich crimson ground, striped and mottled with white; flowers single.

N. variegata, is a distinct variety, with variegated leaves, forming a pretty contrast with the others, producing single flowers of a pale, pink color.

N. alba is a variety bearing double white flowers, is more delicate in its growth than either of the preceding; these plants will stand from six to eight degrees of frost with-

out injury, and will keep well in a dry cellar through the winter.

Plumbago capensis; this is a charming shrub for planting out, bearing its large spikes of delicate blue flowers in the greatest profusion from May until frost, of which they are very sensitive and should be raised before risk of exposure to its effects.

Punica granata, the Pomegranate in its varieties are very ornamental shrubs, nearly hardy enough to stand the winter in the latitude of Cincinnati, but must not be trusted without protection; the two finest are the large double scarlet and the dwarf fruit bearing varieties, they will all keep well in a cellar during the winter.

Should the foregoing be thought of sufficient interest for the readers of the Review, and time and opportunity will permit, I may recommend you a list of herbaceous and climbing plants, suitable for training and bedding out in this region.

WM. HEAVER,
Reading Road Nursery, Cincinnati.

WARD CASES.

A **WARDIAN CASE** is nothing more than an oblong box, about five inches deep, with a ledge all round the top. Upon this ledge rests a glazed frame, in shape like a Lilliputian span-roofed hothouse. It is generally as high as it is long. We should recommend one of the following proportions: Four feet long, two and a half feet high, and eighteen inches wide. Such a one, handsomely made, glazed and painted, would cost about \$15 to \$20. The glazed part should be separated from the bottom, so that when the ferns require any thing done to them, it could be lifted off, the work done, the glass cleaned, and then set on again. A glass door in the center is also desirable; as, when the atmosphere is colder outside than inside the case, the moisture condenses on the glass inside, and the beautiful inhabitants are almost invisible. This renders a door useful. Open it a very short time, and the moisture or steam will evaporate

or dry away, and the little paradise will again show its beauties to the admiring spectator.

The soil to grow Ferns in, is rough fibrous peat, the finer parts being sifted out, and the rest broken by the hand into small pieces.

TEMPERATURE.—Wardian Cases should always be kept free from frost. If the hardy ferns only are cultivated, the case may stand upon a balcony or window-sill; but if the case is placed in a room where a fire is kept, exotic ferns will thrive in it luxuriantly. The temperature of a living-room is generally between fifty and sixty degrees of Fahrenheit's thermometer, and supposing the case to be in a room of that description, the list on our next page will be suitable for our friend "A Working-Man's" case.

WATERING.—To his next question,—how often water is required?—it is somewhat difficult to give a satisfactory answer. So much depends upon whether the sun shines upon

the case—whether the plants are growing and in health—and the retentiveness of the peat in which they are planted, that our answer must be rather a vague one, only amounting to this,—that if the earth is dry inside, or below the surface, it requires water. If the plants are growing luxuriantly, they require more water than when the leaves (or fronds) are matured or going to rest. If the sun shines on the glass, we may expect moisture will be drawn up from the soil by the heat, and, consequently, a small quantity of water will be required. In all the operations of gardening there is not one that requires such nice discrimination,—such good judgment, as the timely and proper application of water. It is impossible to give such minute instruction in regard to watering, so as to be quite sure we have well informed the operator. Observation and experience are the best, the safest guides in this important matter. Wardian Cases, however, very seldom require watering. We have known some that have not been watered for twelve months, and yet some of the plants had grown remarkably strong. We do not recommend such an extreme. Examine the soil, as we said before, and if it is dry, give a little tepid (lukewarm) water. Do this during the morning, and leave the door open for an hour or two, to carry off the superfluous moisture in the air.

Some of our cottage friends are ingenious enough to make such a case for themselves. We trust, also, that there are a goodly number of them who are lovers of plants, and who would not think it much trouble to make a case for them. Should they not be able to purchase glass, the frame might be covered with oiled paper, and the ferns would live and flourish under it nearly as well as under glass.

The following plants will thrive under a cover of this kind:—*Sarracenia purpurea*, *S. flava*, *Cypripedium insigne*, *C. venustum*, *Yucca Filamentosa variegata*, and some of the more woody *Mesembryanthemums*, or ice-plants. On the ribs of the roof some eyelets, or rings, may be fastened, and suitable plants procured to hang from them. This will materially add to the interest of the miniature conservatory. Some of the long leaved ferns thrive well thus hung up. The ball of earth belonging to each plant should be wrapped up in a little moss, tied round with some copper wire, leaving a loop outside to hang them up by; or they might be suspended in small baskets, made of copper wire, or china, or even gutta percha. One of the last named material, about the size of a breakfast cup, was shown us by a friend a few days ago, and a neater little thing for the purpose can not be conceived.—*Cottage Gardener*.

ANTIQUE BUILDING MATERIAL.

SUN OR AIR-DRIED BRICK.

DR. WARDER: Some six years since, my attention was first called to the utility and economy of sun or air dried bricks, as a desideratum for building material, by my brother-in-law, the Rev. John A. Murray, of Geneva, New York, in which place they have been used for inside and outside walls of dwellings for several years previous to that time.

From his own observation, as well as the opinion of persons living in sun dried brick houses, he was then so well pleased with these bricks, as strongly to recommend the material to me for building. Since then he has had personal experience and experience of that

character which is well calculated to test the relative merits of both sun dried and burnt bricks in dwellings; having a large, well-built house of burnt bricks, to which he built an addition of the sun dried brick, and thus by passing from within the walls of one material to the other upon the same moment, and under the same outward atmosphere and similar circumstances, he possessed superior advantages for forming a correct opinion.

His own experience more fully confirmed the opinion he had formed previously, and he in stronger terms urged upon me the desirableness of sun dried brick walls, and their great superiority over burnt brick walls. The

inside of the walls of burnt brick houses, as a general thing, in the country, in damp weather, are covered with moisture, of which we hear such universal complaint, and when a room of such a house, has been closed up for two or three days, upon entering, what a damp, chilling sensation is felt, and who living in them has not realized and noticed this? This is not the case with the sun dried brick house, as the walls never sweat, (as it is called) and no dampness can be discovered in a room which has been shut up for a few days.

He informed me that the change is plainly perceptible in passing from one part of the house of one material, to another part of the others material; the atmosphere of each being very different, and especially in damp weather; that amid the burnt brick being unpleasantly raw and disagreeable, while the sun dried brick possesses a peculiarly soft dryness, which is delightfully pleasant.

I was also referred to the Reports of the United States Commissioner of Patents, the Hon. H. L. Ellsworth, for the year's 1843 and '44. In the report of 1843, after giving the process of preparing the clay, making the brick and sizes preferable, the manner of laying up the walls, the kind of mortar used, etc., etc.; Mr. Ellsworth says: "The walls may be safely carried up one story, or two, or three stories; the division walls may be made seven inches in thickness, of brick made that size for the purpose. The door and window frames being inserted as the wall proceeds, the building is soon raised."

"The exterior walls are plastered with good lime mortar, and then a second coat, pebble dashed if desired. The inside is plastered without dashing. Houses built in this way are dry, warm in winter, and cool in summer, and furnish no retreats for vermin. The question will naturally arise, will the wall stand against the rain and frost? I answer they have stood well in Europe, and the Hon. Mr.

Poinsett remarked to me, that he had seen them in South America, after having been erected *three hundred years!* Whoever has noticed the rapid absorption of water by a brick that has been burned, will not wonder why brick walls are damp. The burning makes the brick porous, while the unburnt brick is less absorbent. In these mud houses, no burnt brick are necessary, except for the top of the chimneys, the oven and the casing of the fire-place—though this last might well be dispensed with. A cement to put around the chimneys, or to fill any other crack, is easily made by a mixture of one part of sand, two of ashes, and three of clay. This soon hardens and will resist the weather. A little lard or oil may be added to make the composition still harder."

"Such a cottage will be less expensive than pine buildings, and durable for centuries. I have tried the experiment in this city, (Washington, D. C.), by erecting a building eighteen by fifty-four feet, two stories high, adopting the different suggestions now made. Although many doubted the success of the undertaking, all now admit it has been very successful, and presents a convenient and comfortable building that appears well to public view, and offers a residence combining as many advantages as a stone, brick, or wood house presents."

In his report for the year 1844, Mr. Ellsworth remarks, "that numerous experiments have been made during the past year, with satisfactory results. The cottage erected in Massachusetts Avenue, Washington City, which is two stories in height, stands well, appears as handsome as the best brick houses, and is warm in winter and cool in summer."

I have been induced to try the *experiment*, (as it is called about here,) and from my experience with the sun dried brick, upon a building erected very late last fall, (the brick being made after the first of October last,) I

am much more favorably impressed, and my confidence has greatly increased in favor of this material for dwelling houses in the country. In climates like ours, the combined effects of rain and frost, may be supposed to present an objection to the durability of such walls, but I think such fears are entirely groundless, and abundant evidence is at hand to show that in Canada these bricks are not affected by frost.

My object in writing, is to call the attention of gentlemen building in the country, to

the sun dried brick—as in the use of them, a drier and far more healthy house is obtained than by using burnt brick, and at a greatly reduced cost.

Should you consider the subject of sufficient interest to your readers, and desire it, I will be happy at some future day, to give you some additional notes and memoranda of my experience, cost, etc.

Respectfully, WM. S. CHAPMAN.

Linnwood, April 14, 1850.

[Such a paper will be very acceptable.]

GRAPE CULTURE IN THE SOUTH.

THE first number of the Southern Agriculturist, issued January 1828, opens with the first of a series of valuable articles by the late Mr. Herbemont, of Columbia, S. C., on the culture of the Grape Vine. It was a subject which had long attracted attention in that state. Grape-growing had been attempted, unsuccessfully, by many of the French emigrants, who settled in Carolina and Georgia after the revocation of the edict of Nantes. A Mr. Magget obtained a sum of money from the Legislature of South Carolina, about the year 1800 or 1803, for the promotion of this object, but failed. Many others were equally unsuccessful. Mr. H. thinks that the success of himself and others, in 1828, was to be ascribed in no small degree, to the more general opening up of the country, and partial exhaustion of the soil; many of the early experiments having been made on lands of too fertile a quality.

He recommends, as the best situation for a vineyard, "a high, airy and dry spot of ground, having no extensive and thick woods overtopping it; for from these will issue foul air, cold damps, and, perhaps other unascertained injurious matters. "Where, in fact, do we find the greatest quantities of the best native grapes, but on the borders of old

fields." He recommends a deep, loose and permeable soil, containing much vegetable mold. The particular exposure he considers of very secondary moment. He enumerates, as the best varieties, only the following native grapes: the *Madeira*, known as *Herbemont's Madeira*; the *Lenoir*; *Red Muscat*, or *Bland's Madeira*; *Isabella*; *Arena*, "a native of our sand-hills, which improves much by cultivation, bears abundantly, and makes a most excellent wine;" and the *Bullace*, or *Muscadine*; merely mentioning the *Scuppernong* incidentally. At a late day he began to appreciate the value of this last. Mr. Herbemont did a great deal toward the successful cultivation of the grape, and of wine-making on this continent, pursuing it steadily during his life, and communicating the results of his experience, through the journals of the day, and otherwise. The Cincinnati growers are greatly indebted to him for information and counsel during the infancy of their experiments. He expresses strong doubts of the *Isabella* being a native of South Carolina, inclining to give it a more northern origin. The *Bland's* or *Powell's Madeira* is supposed to have been raised in Virginia from the seeds of raisins. His *Madeira* is not the same as *Prince's Violet Madeira*; "but is:

the same as that called by some Warren, (or Warrington, perhaps). It is the best grape which, as yet, I have tried for wine." With the *Catawba* he was unacquainted in 1829, but expected to procure it that spring. It is now the only grape grown about Cincinnati, to any extent, for wine-making.

Mr. H. considers the practice of adding sugar to the wine to be injurious; but prefers sugar added before fermentation, where strength is wanted, to spirit in any form. "I am decidedly of opinion that brandy added to wine is destructive of some of its best qualities." Mr. Longworth remarks, in a letter of late date: "I know that Mr. Herbmont, of Columbia, S. C., was in the habit of adding as much sugar, (1 to 2½ lbs. to the gallon of must,) yet when his wine was offered for sale at public auction, soon after his death, most of it was turned to vinegar, or undergoing the acetous fermentation." Mr. L. adds: "Many are under the impression, that the grape further south possesses more of the saccharine principle than it does with us. I believe this is never the case; and if it is, it is more than counterbalanced by their vintage coming on in the last of summer, and the grape possessing a larger portion of the fermenting principle." Now, although by no means willing to enter the lists with one of Mr. L's. experience in wine-making, I must remark, that so far as my observation goes, there is not a doubt of the grape possessing more of the saccharine principle here than further north; and that the Scuppernong yields a richer

juice than any other native grape—Mr. Weller's addition of spirit or sugar to his Scuppernong wines, to the contrary, notwithstanding. And Mr. L. is also in error as to the date of the ripening of this, our most valuable grape, which is not till September.

In the same number of the Western Horticultural Review in which Mr. Longworth's remarks appear—to leave the old for more recent publications—the Editor of the Review, in publishing some remarks of mine on fruit culture in the South, thinks "it is difficult to realize that the Muscadine, or Scuppernong can be considered 'the best and most profitable among many kinds cultivated'—it is hardly possible that the Black Hamburg or even the Catawba, are in the latter category." The Muscadine is to the Scuppernong what the most ordinary Fox grape is to the Catawba. I do not pretend to compare the Scuppernong to the Black Hamburg, for individual excellence as a table fruit, this excelling, to most tastes, the Catawba, in that respect. Yet, "of many kinds cultivated, I am inclined to think that the varieties, (meaning improved varieties) of the Scuppernong, are the best and most profitable." They bear a fine fruit in uniformly heavy crops; and had we a population of vigneronns in any part of this hill country, such as cluster on the hills about Cincinnati, encouraged and sustained in their first establishing themselves, by any one such public-spirited, far-seeing individual as Nicholas Longworth, we should rival you in wine-making.

SCUPPERNONG.

[This article was written for the New Orleans Picayune.]

VEGETABLE PHYSIOLOGY. No. 2.

If we imagine ourselves placed on an island just heaved up from the bosom of the ocean, or gradually and imperceptibly elevated, by the slow and continued industry of infinite myriads of insects acting with in-

stinctive concert for infinite ages, nothing but desolation would surround us. The blackened scoria of the volcano, or the rugged coral would be the only evidences of existence; but such a state of things would not continue

long. Progressive development toward beauty and perfection is a law written upon both mind and matter, and the first step would soon be taken in the desolate region under the guidance of inevitable law. It is easy to imagine what that first step would be, and no less easy to see the wisdom of it. Organization must ever precede sensation; for since all sentient beings are compelled to rely on the products of non-sentient organization for support, it is therefore evident that vegetable life must, in all cases, and under all circumstances, precede animal life.

By the infinite wisdom of Him who spake light into being, the third great period of creation was devoted to the separation of the land from the water, and to the clothing of that land with verdure, so that it might become a fitting habitation for the "*moving creature that hath life*."

The surf beating on the rugged shores of our newly elevated island, would bear on its bosom floating fuci and algæ, and deposit them on the sharp points of the scoria or coral, there to be resolved into their original elements, and mingling with the debris of the solid rock, become pabulum for the development and support of some of the simpler forms of vegetable life, whose minute and dust-like spores seem to load every breath of air. These, by decay, would assist in the work of increasing the soil, until after successive generations should have drawn from the air, the earth and the water the necessary elements, organized them by their inherent vitality, and deposited them as vegetable mold by chemical action, it should become a fitting abode for the higher types of vegetable life, and be prepared to take its botanical position on the globe in accordance with its geographical situation and geological condition.

This done, the development of *animal life* comes next in the great creation series. We have then a world-type in our little island—

mineral, vegetable, animal: in other words inorganic, organic, and organic and sentient; depending each upon the other in the order in which we have named them, and representing the "beginning," the third and the fifth periods of the Mosaic cosmogony.

We have now our imaginary island clothed in verdant beauty; add man, the organic, sentient and rational, and the creation series is complete. He looks around him and sees all harmony, all beauty; he casts his glance upon the lily, the delicacy of its fragrance, its beauty and its symmetry, the adaptation of its foliage; he cannot fail to see all depend upon fixed and unalterable laws imprinted on inert matter in accordance with the Divine principle of progression, the great outlines of which may be expressed as—FIRST, mineral; SECOND, organic; THIRD, organic and sentient; FOURTH, organic, sentient and rational.

In studying the varied natural objects that present themselves to our observation and attention, from their immediate connection with our welfare and happiness, or excite our curiosity by their beauty and variety, our first attempt at classification would probably be the very natural and, at first sight, seemingly simple one of mineral, vegetable and animal, between which the distinction seems broad and obvious, and indeed when viewed as great divisions of natural objects, it is so. The solid limestone or the everlasting granite, differs no more from the magnolia or the oak, than do these from the eagle or the lion.

But the student of nature will find, before he has progressed far in his investigations, easy as it may seem, and simple as he may have conceived the task of defining the exact boundaries of each, that here, as in all the works of Deity, there are some things "*past finding out*." A chain of being, extending from a monad of a single cell, (the simplest form of organized life,) up to man with his

complex and elaborate system of nerves, muscles and blood-vessels, in an unbroken and perpendicular series, is the common view of life; but at what point in the series is sensation, superadded to organization? To reply to the question, it is only necessary to refer to the sponge which, if at all endowed with animal life, must be of so low a grade as to justify both botanist and zoologist in laying claim to it. Without perceptible nerves or muscular fibers, without organs of sense or circulating or glandular apparatus, its existence as a sentient being is as far removed from all our ideas of animal existence, as is that of the oak or tulip; indeed the whole family of polypiferous animals rise so little above the lower grades of vegetable being, as to be almost universally classed among them by casual observers.

How low must be the grade of vital action in an animal that admits of being turned inside out, like a glove, without seeming to interfere with the healthy performance of its functions? A little reflection will convince us that so far from the apex of the vegetable column being the basis of the animal, that the lowest grade of vegetable existence is scarcely, if at all, distinguishable from the lowest grade of animal. We then have them base to base. The idea of regular gradation advancing step by step, from the lowest vegetable to man, is therefore evidently a fallacy. That the popular mind should have

seized upon a theory seemingly so simple and complete, is not wonderful when we reflect on our innate desire to comprehend and account for the arcana of nature; but we have taken only the first step in solid knowledge when we have learned our ignorance.

It is not our intention to enter into an elaborate discussion on the vexed question of vitality, about which so much has been written to so little purpose. Many of the functions of vegetable and animal life are entirely explicable by chemical and mechanical laws, but not all. By no known law can we account for the fact that the liver separates from the blood a highly carbonized matter denominated bile, or why the kidneys separate acids and salts dissolved in water, rather than the reverse? By what peculiarity is it that the hemlock eliminates poison through an organization similar to and from the same soil from which the *Saccharum officinalis* distills sugar?

To answer these questions we are driven to the mysterious something denominated vitality: and how much is known of this beyond the name? The truth is, no definition has ever been given, and probably never will be that can in every instance define accurately the line of demarcation between animal and vegetable life. The distinction must be sought rather in an extended view of vitality, than in any terse definition; but more of this in our next.

T. SALTER.

REPORT OF THE WINE COMMITTEE,

ON THE WINE EXAMINATION HELD MARCH 29, AND BY ADJOURNMENT APRIL 1, 1851.

The wines were all marked with numbers, in uniform bottles, without any designation by which the competitors could be known. It was agreed that the bottles should be brought on the table in classes of four at a time, and the decision should be made by a

silent vote, each member of the committee to write the number of his choice sample in each class upon a ballot, and the bottles thus selected, to be set aside for further trial.

After passing upon them, the *reconsideration* was had, with separate classes of the fol-

lowing seventeen numbers; 30, 12, 14, 38, 29, 31, 25, 6, 26, 7, 37, 34, 21, 10, 15, 24, 46; from which a selection was again had among the following numbers: 30, 7, 37, 38, 46, from which the awards were rendered as follows, though all were excellent and the selection difficult.

1st premium to No. 30.
2d " " " 7.
3d " " " 46.

Several of the other specimens were so good that the committee regretted that they could not award premiums to them also; and they feel authorized, by the character of the wines generally, to say that the vintage of the last season (of 1850), is superior to that of either of the last two years.

Some of the remarks made by the committee, are appended, taking the wines in their numerical order for convenience, though it should be stated that the samples were taken up at random, except that the committee preferred trying the different kinds of wines separately.

1. <i>Herbement</i> , dark wine.	} These wines were not admired by the committee, though possessing excellent properties; to the palate already committed to Catawba flavor, they lacked the desired charm.
2. <i>Ohio</i> , "	
4. <i>Lenoir</i> , "	
5. <i>Herbement</i> , "	
8. <i>Ohio</i> , "	

3. *Minor's Seedling*, a very fine sweet wine, too much sugar to be agreeable, but of fine flavor.

6, 7. *Catawba*, both remarkable for their fine aroma; the latter especially was often referred to as a point of comparison.

9. *Catawba*, very fine flavor and aroma, selected on the first trial.

10. *Catawba*, superior, received a unanimous vote on the first trial, as did number 6 in the same class, against 4 and 11.

11. *Catawba*, delicate pinkish color, not clear, sweet.

12, 13, 14, 15. *Catawba*, all fine wines and much admired; three of these were selected on the first trial.

16, 17. *Catawba*, were not so highly admired, being in competition with 22 and 7, the latter receiving the unanimous vote.

18. *Catawba*, very high flavor and aroma, but retaining so much of its sugar unchanged, that it was almost suspected of having an artificial addition.

20. *Catawba*, very delicate and strong, but yielded to 14 and 13 in the same class.

21. *Catawba*, very delicate but considered weak; selected with 15 and 34, leaving 18.

22. *Catawba*. Not selected.

23. *Catawba*, good strength. (20 to 23 all fine and clear.)

24. *Catawba*, not clear and set aside as poor.

25. *Catawba*, delicate and fine, but weak; selected on the first trial with 30, 37, and 12.

26. *Catawba*, selected with 6, from 27 and 35.

27. *Catawba*, much admired, but not selected.

28. *Herbement*, much admired, a white wine, but not considered equal to some *Catawbas*.

29. *Catawba*, fine and full strength, selected with 38 against 32 and 44, but on second trial falling behind 30 and 38, along with 12, 14 and 31, the rest of the class.

30. *Catawba*, stood the test throughout and came over first.

31. *Catawba*, very much admired and preferred to 28, 33, 36 and 47, that were grouped with it in the last class.

32. *Catawba*, fine, but fell behind 29 and 38 on the first trial.

33. *Catawba*, admired, good color and body, but not selected.

34, 35. *Catawba*, fine and strong, good flavor; 34 was set out with 15 and 21 on first trial, each of the three receiving two votes, but with 25 and 26, it yielded to 7 and 37 on second trial.

36, 37. *Catawba*, much admired for color, body, flavor and aroma, the latter, stood the test on the first trial, but yielded the palm with 38, only on the the third and last tasting.

38. *Catawba*, constantly selected till the last trial.

39, 40. *Cape*, not in competition, being old wines.

41, 42, 43, 44. *Catawba*. These delicate wines were supposed to lack body, at least they were not selected on the first trial.

45. *Catawba*, not very strong, fine, but not so high in aroma, yielded with 48 to 46 and 9.

46. *Catawba*, very much admired on every trial.

47, 48. *Catawba*, not selected.

49, 50. *Catawba*, very fine, but not in competition, being old wines.

Appended hereto will be found a serial list of all the specimens of wine received, with the names of the competitors and their answers to the several questions directed to be propounded. To this the Secretary has since appended the specific gravity of each sample carefully observed, at or near the standard temperature (60° Fahr.), with the wine scale of the society, but these weights were unknown to the committee up to the time of making this report.

JOHN P. FOOTE,
JULIUS BRACE,
S. ROBERT,
GEO. GRAHAM,
L. REHFUSS.

RECORD OF WINES—SPRING SHOW, 1851.

Names.	No.	Question A.	B.	C.	D.	E.	Tem.	Sp. Gr.
F. Schneicke ..	1	Herbemont	pure	cask,	free	small cask	56°	53 $\frac{1}{4}$
"	2	Ohio	"	"	"	"	60°	6
"	3	Minor's Seedling	"	"	sugar	"	59°	24*
"	4	Lenoir	pure	"	free	"	60°	2
"	5	Herbemont	"	"	"	"	60°	51 $\frac{1}{2}$
"	6	Catawba	"	"	"	large cask	62°	71 $\frac{1}{2}$
"	7	"	pure	cask	free	"	60°	71 $\frac{1}{2}$
"	8	Ohio	"	"	"	small cask	60°	0.
Mrs. Haller....	9	Catawba	"	"	"	"	60°	6
M. McWilliams	10	"	pure	cask	free	70 gals. 3-18	60°	5
T. W. Jones....	11	"	"	"	"	47 gals. 3-26	60°	7*
G. Sleath.....	12	"	"	"	"	300 gals. 3-18	60°	41 $\frac{1}{2}$
"	13	"	"	"	"	"	60°	6
"	14	"	"	"	"	"	60°	51 $\frac{1}{2}$
"	15	"	"	"	"	"	60°	41 $\frac{1}{2}$
J. W. Gazlay ..	16	"	"	"	"	"	60°	61 $\frac{1}{2}$
"	17	"	"	"	"	"	"	"
W. Neff.....	18	"	pure	cask, syphon	purely	65 gals. 3-21	60°	14*
T. H. Yeatman	20	"	"	cask	free	120 gals. 3-21	63°	7
"	21	"	"	"	"	800 gals. 3-21	62°	11 $\frac{1}{4}$
"	22	"	"	"	"	"	60°	5
"	23	"	"	"	"	120 gals. 32-1	60°	6
"	24	"	"	bottle	"	"	60°	31 $\frac{1}{2}$
"	25	"	"	cask	"	800 gals. 3-21	60°	3 $\frac{1}{4}$
"	26	"	"	"	"	"	60°	5
S. Rintz.....	27	"	quite pure	"	"	800 gals. 3-22	60°	5
"	28	Herbemont	"	"	"	22 gals. 3-22	60°	43 $\frac{1}{4}$
John E. Mottier	29	Catawba	pure	"	"	700 gals. 3-10	59°	7†
"	30	"	"	"	"	80 gals.	60°	71 $\frac{1}{2}$
R. Buchanan ..	31	"	"	"	syphon	400 gals. 3-10	62°	61 $\frac{1}{2}$
"	32	" stemmed	"	"	"	"	62°	6
H. F. Sedam...	33	"	"	"	"	130 gals. 3-27	60°	51 $\frac{1}{2}$
David Ross....	34	"	"	"	"	168 gals.	61°	8
"	35	"	"	"	"	"	57°	7†
S. S. Jackson..	36	" } stemmed,	"	"	4 gal.	15 g. in 40 g. ck	60°	7
"	37	" } very ripe	"	"	"	35 g. in 40 g. ck	60°	7
R. Buchanan ..	38	"	"	"	"	400 gals 3-10	64°	5
G. Sleath.....	39	Cape } not in	2 oz. sugar	"	"	"	64°	71 $\frac{1}{2}$
"	40	" } competit'n	cape brandy	"	"	"	64°	71 $\frac{1}{2}$
Corneau & Son	41	Catawba	pure	"	"	250 gals. 3-26	59°	3
"	42	"	"	"	"	"	59°	4
"	43	"	"	"	"	"	59°	4
"	44	"	"	"	"	"	59°	41 $\frac{1}{4}$
C. S. Felter....	45	" not v'ry ripe	20 lbs. to 45 gals.	"	sw'tened	45 gals. 3-10	61°	41 $\frac{1}{4}$
D. Z. Sedam...	46	"	pure	"	free	80 gals. 3-28	60°	5-
F. Ballard.....	47	" late	"	"	"	60 gals. 3-29	60°	1*
"	48	"	"	"	"	"	61°	1*
P. Bogen.....	49	" } not in	"	"	"	"	61°	1 $\frac{1}{2}$ *
"	50	" } competit'n	"	"	"	"	"	"

* The weight marked thus represent the specific gravity as heavier than water, owing to the amount of unchanged sugar they contain.

Chinese Gardening.

THE British Consul, at Ningpo, found himself extremely incommoded by the smells from two jars in the vicinity of the residence assigned to him by the mandarin of the district. Upon expressing his desire to have them

removed, he found that it could only be done at the expense of many dollars, for that certain parties, through several generations, had purchased the right of having all the house-slops, etc., emptied into these jars, for use upon their grounds.

LETTER FROM MRS. GAGE.

DR. WARDER—

Dear Sir :—The December number of the Horticultural Review, made its debut at Mt. Airy during my absence in Columbus last winter. I was taken sick there, and after six weeks confinement, brought home upon a bed, and continued unable to sit up until the middle of March.

Your compliments were read to me as I lay upon my pillow, in doubt whether I should ever be able to use my pen. Thanks, sir, for the compliment. But it makes my head swim to hear even a suggestion that I am "well informed on the subject of horticulture." Bless you! I have just sent John for the dictionary to see what the word really does mean.

Horticulture, says Webster, "The art of making gardens," alas! for my information.

My young days were spent upon a farm, but I do not now remember even so much as weeding out an onion bed. The men folks took charge of the great garden in the corner of the field. All I had to do with it, was to gather the vegetables when ripe, for my mother to cook for the table. In the way of flowers, I used sometimes to drop a few seeds of the Pretty-by-night, Bachelors'-button, Touch-me-not, and Poppy, here and there, though they never gave me much reward for my pains.

But no amateur gardener ever gloated over his parterre of rare exotics, with more exquisite pleasure, than I did over the banks of blue violets, adder's tongues, for-get-me-nots, and wake-robins, that sprinkled hill and valley around my home. I would risk my neck among the rocks and precipices, to clutch a jack-in-the-pulpit, or a wild columbine, and many a time have I torn my clothes and skin too, climbing the tall poplar to bring down its tulip blossoms.

My little play house stood within a stone's throw of the log school house in the wild woods, where "I got my larnin'"—that is, learned to read and spell, braid straw hats, and piece nine patch. That play house, built of long poles tied together with paw-paw bark, seldom went unadorned, with its rich carpet of velvety moss, or its bright bouquet of wild flowers.

No fashionable belle ever received her calls with more "put on airs," or flirted her fan, made of ivory, feathers, and gold, with more pride than I mine—made of paw-paw leaves, pinned together with thorns, and bordered round the edge with stars of the wild crimson pink.

After my days of childhood, I remember but one feat, leaning toward Horticulture, of my doing worth mentioning. I set a common hundred-leaved rose under the window, and trained it to the house top, two stories or more; oh! it was a thing of beauty, in the time of roses—with its upstretching wreaths of deep tinted blossoms—almost as large again as those that vegetated near the earth.

I married at twenty, and in the beginning of the second year thereafter, found my care and time pretty much engrossed by a delicate little house plant, that had been placed in my hands.

I lived in a village, and had but little chance for a garden; and for sixteen years, I attended almost solely to my *house plants*, which increased to eight in number. I have my reward—they have all lived—some of them have reached an altitude of six feet, are strong and vigorous, and will soon do to set out to battle the winds of life on their own hook.

Five years ago we purchased a *whole acre* of ground, a hill side adjoining the village, and removed ourselves thereupon with all

speed; and now I look down upon a grassy slope, spotted with dandelions, and shaded with locust, apple, pear, and cherry trees. The wild crab and thorn apple regale me with their delicious fragrance. Evergreens cheer me with perpetual verdure, and grape vines all about, promise luxury hereafter. Currants and gooseberries fill up the slope, and blackberries are permitted to grow in the waste places. A wild multiflora creeps to the eaves, at each end of the house, nodding proudly at an evergreen and monthly honeysuckle, which unite harmonious over the porch, and they in their turn wave their branches familiarly to their friend the Irish ivy, that creeps up the wall,—and to the wild Bitter-sweet that is clinging to the locust, and striving to rise in the world. A Mississippi Creeper coils lovingly round the clothes line post, and shelters in a most kindly way, the house of the blue bird upon the top.

There is a purple noisette that acts a little selfishly, and is disposed to take more of the summer house to itself than belongs to it, and must be taken in hands, or a fine Catawba grape vine will feel its rights infringed upon.

The White, Cinnamon, Damask, Crimson Provins, and Cabbage Roses, behave very well, and take care of themselves,—though I do suppose they would be grateful for more attention, and return me thanks by a richer harvest of flowers.

But their mistress, like other mistresses, has her favorites, and a little border or two of *little* things, claims most of the time she has to spare from more imperative duties.

The loves of my childhood, come back to me in my old age. Ah, how I would love to pick you a bouquet of wild flowers from my border this day. I might, just to make up the variety, put a daffy, hyacinth, crocus, jonquill, polyanthus, and iris into the center, and if I should wait a week or so, I might enrich it with lilacs, snowballs, and

peonies—and any amount of old fashioned tulips. But after all, I shall be afraid to present it, lest you, who live among all the luxuries and refinements, the richness and beauty found in a great city, might think my offering not worth the taking. But if some bitter, biting April or May frost does not blight my hopes, I shall be able to furnish you with a few choice roses from shrubs sent me last year by a friend from your city, selected from the garden of Mr. Jackson. A Souvenir Malmaison, Jacksonia, Purple crown, Compté d'Eu Alba, La Reine, Dr. Marjolin, etc.,—all of which I am told would bear our winter. But most of them took the liberty of dying down to the root, even among the genial warmth of the past season, but are sprouting up vigorously again, and I trust will bloom in due time.

No, Mr. Editor, I am not informed in horticulture, but I do earnestly wish to be; and this wish makes me dare to address you, in the hope that I shall be able through you to gain the knowledge I need.

I love flowers, and have strewn them about me in wild confusion; and their beauty and fragrance give a rich zest to many a passing hour.

To cheer and brighten this world of ours,
God gave us in wisdom, the birds and flowers,
And cold is the heart that can sigh in gloom,
While a bird can sing, or a flower can bloom

Yours, truly,

FRANCES D. GAGE

McConnellsville, April 2.

DEAR LADY FRIENDS—You who wish well for the success of this work, have read the preceding article, I am sure, were it only for sex's sake. Allow our readers to have the pleasure of hearing from others who will take sufficient interest in my prosperity to aid me in rendering these pages attractive. Send in your pleasant effusions, to add variety to the matter of fact practical details of the gardener, received from the old diggers.—[Ed.

FRUIT IN CELLARS.

AN article, under this caption,* appeared in the January Review; and the author seems to think that free ventilation is absolutely necessary to the preservation of (gathered) apples. But "doctors differ;" and I will give you my experience and practice—which is *directly* contrary to the mode recommended by the "Albany Cultivator."

We have a cellar, of which the sides are lined with boards, (for it was originally an ice-house;) our apples were put into it early in October, in barrels and troughs, and have had no air or light, except what was admitted by the door standing open while a basket full of fruit was taken out for family use;

* Webster does not allow this use of the word—but the Review does.

the apples are now fine and plump, and crisp and juicy—and I am very confident there never was a store of winter fruit that had fewer decayed ones among them. Our Belleflowers remained beautiful until about the first of this month; and we have now among others, a kind that I wish I could send you a sample of—they are of a *mellow* green color, singular in having a protuberance on top, and when pared exhale a delightful perfume. As all our neighbors keep their apples in "well ventilated places," and every one is complaining of the prodigious decay, I thought I would, though against my principles, recommend "darkness rather than light"—for apples. C. C.

Woodside, Ky., Feb. 28, 1850.

STRAWBERRY CULTURE.

DEAR DOCTOR—Being but a beginner in the world, and much inexperienced in that (to me) interesting art of garden culture, (horticulture,) and withal an entire stranger, I felt a little diffident of addressing one occupying the editorial chair of (I have no doubt) an interesting and valuable paper, devoted to the above named art.

That interesting little paper, "The Western Farmer and Gardener," or rather its *Editor*, has the credit of first calling my attention to the cultivation of fruits; and since its discontinuance I have been a regular patron of "the Ohio Cultivator," and have read some in a few other periodicals; but my knowledge is still so limited I feel a desire to enlarge the boundaries, and add a little more to my *small stock*.

I think I should have been ere this a reader of thy paper (Western Horticultural Review) could I, under the present critical time with me here, have persuaded myself

that I was fully able to defray the subscription, etc.—and besides, it was some time before I could learn the terms—so I have settled down with the resolution of being a reader of the next volume, if life is spared, [and the present, also?]

I spend some of my leisure moments in the garden, amongst my *strawberry vines* and *gooseberry bushes*—those being the *principal* garden fruits to which I have turned my attention. I have some or fifteen varieties of strawberries, and a number of gooseberries under culture, testing their value; I also have a number of seedlings of each, of my *own* growing, which I am desirous of proving.

The many new seedling strawberries brought into notice, render it next to impossible to enumerate them, let alone cultivate them. From the little sketches of information I have obtained, I find that Hovey's seedling originated about the year 1834, with C. M. Hovey, of Boston; but from whence he

obtained the seed that produced it, I have never learned—whether from a cross between two varieties or not. Suffice it to say, it is a splendid berry: If I mistake not, Nicholas Longworth says it has no equal, particularly for size; which conflicts a little with J. Burr's statement—if not with Dr. Brincklé's—not that I would prefer their opinion to his. I have looked on with some amusement at the "controversy" between him and the *Eastern Pomologists*—not doubting a bit but that he could take care of *himself*, on "*strawberry*" and "*grape*."

Hovey & Co. have since originated some other seedlings, among which the "*Boston Pine*" is said to be excellent. Some author," (perhaps H. W. Beecher,) informs us, that Hovey said, no one ever raised a seedling of any value by planting the seed of his "Great Seedling," and then refers to Dr. Brincklé's seedlings, some of the best of which were from Hovey's; and we have an evidence to the *contrary nearer home*. The mother of J. Burr's *best* seedlings was Hovey's; and no doubt many other persons have originated *very good* seedlings, and will continue to do so, from the same fruits. It is the parent of many seedlings I am experimenting with.

The *Cushing* is recommended as the strawberry to take the premium offered by Longworth. One with perfect anthers, bearing a *full* crop as large as Hovey's seedlings, the *Black Prince*, (whether it is a seedling of Dr. Brincklé I can not say,) is said to be fine also. I have four of Burr's *best* seedlings, (procured last spring,) which, if they prove *nearly* equal to what is said of them, will excel Hovey's—in flavor, at least. Of the latter variety I agree, that it is "*large and showy, but not high flavored*." I learn from G. M., of Richmond, Ia., that N. Longworth has raised some *splendid* seedlings, surpassing Hovey's; but this is all I know of them:—are they better than Carter's,

McAvoy's, or Schneicke's, noticed by the fruit committee of the Cincinnati Horticultural Society last summer? Are any of those *newer* varieties *equal* or *superior* to Burr's New Pine, which is said to be the *best* American strawberry grown? I do not wish to be understood, from the query, that I think our *fruits* are good enough!—that it is needless for amateur fruit culturists to spend their time in endeavoring to originate better fruits, etc.! Nay—what would our fruits have been, even at the present day, had it not been for the indefatigable labors of Van Mons. Knight, and a host of other kindred spirits of more recent date; these men are *truly* public benefactors.

I am for improvement, "upward and onward"—not quite willing to settle down in the conclusion, "that we think the same thoughts our fathers have thought, and do the same deeds our fathers have done;" not but that many of them have done many good and notable ones. But if we can procure a better apple, peach, pear, plum, cherry, grape, etc., why not be up and doing?

I was much perplexed to get the seeds of the *strawberry* to vegetate, in my first commencement—being led to follow, as I thought, Dr. Brincklé's directions: he says—"having many kinds from seed planted *last summer*, *after strawberries were ripe*;" so I went to work—pressed the seed from the berry, washed them, scalded them, planted in the open border, in covered hot-beds, etc., and but few ever vegetated; yet I was puzzled when I saw many coming from seed in the beds from berries which had escaped gathering: so what was the matter? I could find no author that *told how* to plant the seed.

I wrote to J. Burr on the subject, and he informed me he "preferred *fall* sowing, on well-prepared ground;" and from my little experience in this way, I think there will be no difficulty in it; the seed should be sowed

in soil that will not bake hard during the winter.*

The idea that (strawberries) varieties *change* their character so as to be transferred from one class to another, so generally believed by those who have not studied fully their character or cultivated them to any great extent, is founded in *error*. I think I am *fully* persuaded that "they *continue* their *original* distinction in the runners, and remain the same under *all* circumstances of cultivation." True, there are several *staminate* kinds, which throw out flowers, (particularly some of the first,) which are defective in stamens; hence the name "hermaphrodite" applied to such as have both stamens and pistils fully developed in their flowers.

I have a variety which I procured of W. J. Thomas, of Troy, for the Cincinnati Hud-

* My seedling grapes got through the winter very well—some of them grew three feet in height, from the seed, last year.

son, which proves to be something else—the berries are round or obovate, with a short neck, on short tresses, very prolific, leaves much plaited, rather small pointed, on short foot stalks, very pubescent; it is pistilate, and the fruit is quite *acid*.

I fully believe that climate and soil will or do have, a tendency to change the *quality* of fruits; hence one of the *principal* causes of the "*strawberry controversy*," and the difficulty with us of cultivating the English gooseberry.

Perhaps I have had enough of *small talk*, at one time, for a *stranger*, and might as well wind it up—as I have been tedious beyond my expectation when I began. Success, I say, to the "Western Horticultural Review;" our rich western soil demands a western paper.

I am respectfully,

L. S. MOTZ,

Near West Milton, O., 4th Mo. 15, 1851.

DR. J. A. WARDER, Cincinnati.

ADVICE TO HORTICULTURAL SOCIETIES.

First.—Communicate with each other as much as possible, and arrange your days of show so as not to have two exhibitions occurring at the same time in different parts of the country.

Second.—The instant you fix the days, communicate with other societies, and publish, that you may avoid interfering with one another.

Third.—In drawing up your schedule, make as few classes as you can, and give as many prizes as you can in each class.

Fourth.—Give no prizes for separate subjects that are not really showy. If you do, a large amount may be expended without much aiding the general effect.

Fifth.—Allow no persons to show in two classes of the same nature, nor to show two collections or stands in the same class.

Sixth.—Remember that local judges, however honest and able, never give satisfaction

to their neighbors, nor to distant exhibitors. Get able and independent men from a distance.

Seventh.—Have paid judges if possible, whose practised eye enables them to do justice to the skill of a gardener, as well as to the novelty of a subject.

Eighth.—Always limit the number of each genus in collections, as "not more than four of one genus" in large ones—"not more than two in twelves"—and only "one in sixes."*

Ninth.—Publish no rules without great consideration; but, once adopted, never depart from them, for it destroys confidence, and weakens your influence.

Tenth.—Never limit the number of prizes for miscellaneous productions, nor for specimen plants; mention the highest and lowest

* Consider whether the sizes of plants, or at least of the pots they are in, can not be limited.

amounts, and let the judges award according to merit.

Eleventh.—Always pay the prizes on the day of show, and provide a place of meeting for the exhibitors and friends to dine, at as low a price as possible, instead of rambling to different places.

Twelfth.—Arrange every thing that competes in separate places, by keeping the classes distinct. Specimens and miscellaneous subjects, which do not compete, but stand on their individual merits, are the only things that may be straggling about.

Thirteenth.—Remember that example is every thing. Be not content with the publicity given by circulars; advertise the objects the instant you fix the days; the money you spend in advertising does more good, by showing the world what you are doing, than twice the amount given in prizes. A string of announcement of shows in a garden newspaper, gives spirit to the lovers of gardening, and if it does not bring you a shower nor a visitor, it does much good as an example, and sets other people at work to produce horticultural shows.

G. GLENNY.

Garden Almanac.

THE CLOTH TREE

(*Broussonetia papyrifera*.)

THE Cloth Tree is pre-eminently useful, and here [at Pitcairn's Island,] as in all places in the South Seas, where it grows, it supplies the natives with clothing.

The manner in which the cloth is manufactured has been frequently described, and needs no repetition. There is, however, a fashion in the beater, some preferring a broad, others a very closely ribbed garment; for which purpose they have several of these instruments, with large and small grooves. If the cloth is required to be brown, the inner bark, of which the cloth is made, is wrapped in banana leaves [*Musa sapientium*] and put aside for about four days; it is then beaten into a thick doughy substance, and again left till fermentation is about to take place, when it is taken out and finally beaten into a garment, both lengthwise and across. The color thus produced is of a deep reddish brown hue.

The pieces are generally sufficiently large to wrap around the whole body, but they are sometimes divided.

Beechy's Narrative.

OUR WILD FLOWERS.

MR. EDITOR: I think you will agree with me in opinion, that our wild flowers are too much neglected. In the hope that some of your readers may be induced to give them a higher place in their esteem, I have selected for publication the following remarks on a few of their number, if you think them worth a place in your valuable Review.

As many of the gayest garden flowers have no fragrance, and therefore we love them less than others, more humble and retiring, so, many of the native plants of our forests, and pastures, have the most useful medical properties; and if we were fully sensible of their value, we should prize them more than the brightest blossoms of the garden walk.

You have seen the meadows sprinkled with the little butter-cup in early spring; many

pastures then appear almost of a golden yellow with their countless flowers. They belong to the family of the ranunculus, a pretty garden flower. The species most common with us is the bulbous-rooted. The root is somewhat like a small onion, while another species has a fibrous root. The bulbous-rooted plant may always be distinguished, as the leaves of the calyx are bent downward toward the flower-stalk. They grow together in one field, and bear the common name of butter-cup, given to them on account of the color and shape of their flower.

It has been supposed by many persons, that the fine yellow color of butter made from the early grass, is caused by the cows feeding on these flowers. But this is not so, as the cows do not eat butter-cups, but care-

fully avoid them. Their taste is bitter, hot and biting, which is a wise provision of Providence, as all of them are more or less poisonous. The flower, leaves, stem and roots, all partake of this injurious quality, the bulbous-rooted less than the fibrous. [?] But though children so frequently gather the flowers, few accidents occur, because their unpleasant taste prevents their being eaten. Yet at the bottom of each petal of the flower, there is a small cavity filled with pure honey. This is found in every variety of the plant, and is marked by a small scale.

If you take a flower of the butter-cup and pull off each leaf of the calyx, or green outer cup, and also the petals, or leaves of the flower, one by one, the little parts called the stamens are left behind. They are seated on the receptacle or end of the stem, on which the seed-vessels, or fruit, are placed. This would not be the case with the rose, for in pulling off the leaves both those of the calyx and the petals, one by one, few if any of the stamens would be left behind; for in the rose and the apple blossom, they are seated on the calyx, and are therefore removed with it. Such plants are never poisonous.

This is a simple fact, but one that is important. The stamens remaining after the calyx is removed, show, almost without exception, that the plant is poisonous; when the contrary is the case, we know that the fruit, when ripe, will be harmless, probably more than this, really pleasant to us. Thus God, in His wisdom and goodness, has given us a sign, as it were, which may be a caution to us in the poisonous plants, or an invitation to partake of his bounty in the good things which he has set before us.

Among the most beautiful of the wild flowers we find in our walks in the spring, is the Columbine, with its horned nectaries, trailing over the rude rocks and hanging in

rich clusters from their rough sides. Plants with nectaries of this description are often poisonous.

The early Honey-suckle we find, too; this belongs to a numerous family, flowering in almost all seasons of the year. The berry of the honey-suckle has a nauseous, unpleasant taste, but this is relished by some of the birds. It also furnishes food for the caterpillar, of a very pretty, small moth called the twenty-plume, with wings which, instead of being in one piece, are divided into a number of feathers, like those of a bird. This moth is worth looking for, and may often be seen reposing with its pretty wings spread out on the glass of our windows.

The white pond Lily is a splendid American flower, often seen ornamenting the surface of some of our smaller lakes. Its petals are very large, and its fragrance delicious. From its beauty and elegance it has been called the swan of the waters. The flower closes at evening, and sinks below the water; its blossoms open again with the return of day, and rise to their place upon the surface.

Quite a contrast to the elegant Lily, is the bright little flower of the *Houstonia*, or as it is called in the country, Innocence. Its star-shaped blossoms appear in the grassy fields and meadows, their color varying from sky-blue to a pure white. It is one of the earliest and loveliest blossoms of spring, and is peculiarly a native American flower, scarcely known out of our own country.

The more delicate of the wild flowers disappear as the season advances, and the heat of the sun's rays increase upon us; but some of them only give place to others of different species and brighter coloring.

The pride of our lofty forests in the early spring is the Judas tree, called by the Indians red-bud. While many of the leaf-buds are just beginning to open and others more

fully expanded, all bearing the softest and most delicate shades of green, this beautiful tree is covered with a show of glowing purple flowers, though none of its leaves have yet appeared, and they are not seen till the blossoms begin to fade. The brilliant appearance of the tree draws many insects toward it, particularly humblebees. But alas, its beauty is all external, and so the poor insects find it, for hundreds of the bees are said to have been seen lying upon the ground underneath its branches while in flower. We must never trust too much to the pleasing outward appearance of any object, for if we do so, we shall often find ourselves miserably deceived. The name of him who proved so false to his Divine master, seems not improperly given to this deceptive tree. It resembles the peach tree when loaded with blossoms—but unlike the peach tree, its flower is succeeded by no fruit that is eatable.

By the side of this show-tree is often seen the Dog-wood, another bright ornament of the forest, at the same season. At a little

distance it seems covered with a profusion of white roses without a green leaf, for its lary leaf-buds have scarcely yet begun to unfold. Its large, pale flowers form a beautiful contrast to the bright blossoms of the red-bud, while both seem mingling with the lighter and darker shades of forest green, producing a most delightful effect.

But do you tire of the wild blossoms of the meadow, the lake, and the forest? If you knew them more perfectly, you would not. Will not some one take up this subject, and tell us more of our wild flowers, their structure and their use? The knowledge will be a treasure to us. A person entirely ignorant of these subjects, might travel over a whole country and find no single natural production worthy of notice, while another in a walk of a few yards, will discover much to interest and improve the mind.

A SUBSCRIBER.

Some of the statements above, are not vouched for by the Editor, though in the main true; it may be they have escaped his notice when engaged in the study of botany.

POMOLOGICAL CONGRESS REPORTS.

Observations on the Fruits of Morgan county, Ohio, lying on the east and west banks of the Muskingum river, between thirty-nine and forty degrees of North latitude. By S. A. BARKER.

THE surface of the county is generally very hilly, and is divided into river and creek bottoms, hills and valleys, with a small portion of level up lands.

The soil is diversified; and may be divided into freestone and limestone; then into gravelly and sandy loams, clay and alluvial. The clay soils are red, blue, yellow and black, and vary from those which are almost pure *alumina* to such as are fully saturated with lime. The loams all contain lime in large proportions. Such is the diversity, that in many fields, containing from five to ten acres, five or more well marked soils are found.

Situated in the same latitude as the lower part of New Jersey, and the upper parts of Delaware and Maryland, with a milder climate, all the fruits which grow there, in such perfection, may be grown in the same perfection here, except pears. It is possible, in time, with proper care and cultivation, these, too, may rival those of the section above mentioned, but, the subject must be better understood than at present. The cultivator here must learn that pear trees are not to be planted in a rich soil, or near a pig pen, a stable or a barnyard, or stimulated into a luxurious growth by any other means. Stimulating pear trees may do in New York, or at Cleveland, but not in this vicinity.

The Currant is an annual bearer with us. So is the Gooseberry, with but little mildew.

Raspberries produce fine fruit, when the

shoots are not winter killed. The Fastolf bids fair to prove our best market variety.

STRAWBERRIES.—These do well with those who understand their cultivation. Hovey's Seedling is frequently thrown out and destroyed during our open winters.

CHERRIES succeed well in dry light soils, but the trees are frequently killed in wet stiff soils, by late vernal frosts, after coming out in leaf. Young trees, too, are subject to a splitting and decay of the bark, on the southwest side, which frequently destroys them. Thorough draining, I believe, will prevent these evils.

PLUMS.—Many choice varieties of this fruit are being introduced. Few, however, ever ripen. In light, loose soils, the Curculio generally destroys all. If any are spared by this insect, they are generally destroyed by a fungus which is called "the rot." In strong, wet clay soils, they sometimes come to perfection, and several varieties have been presented at our fruit meetings, measuring six inches in circumference.

GRAPES.—The native varieties do well when properly cultivated. Many have been destroyed the present season by insects, said to be the grape Curculio.

PEACHES.—Our climate suits the peach. On our rich bottoms and in protected situations, many of the budded varieties are annual bearers, and produce most delicious fruit. If the trees are too much exposed, however, to the sun, in autumn, the blossom buds frequently become so much swollen, that during the winter they freeze, die, and drop off. A full crop, on our uplands, is never expected two years in succession. The trees require a virgin soil. Our green or white skinned seedling peaches are very liable to be attacked on one side by a fungus like mildew, which causes that side to contract while the other expands; the peaches consequently crack, and soon rot. The Blood clings, even when budded, are very liable to be thus attacked.

APPLES are the great staple fruit of this county and State. On our river and creek bottoms, and on our limestone lands, they are grown in great perfection. When it is recollected, that, in 1820, this county contained only about 5000 inhabitants, and that with a present population of over 30,000, the reader is informed that more than one half of our lands are yet in a state of nature, he will perceive that most of our orchards are yet

young. When he is informed, too, that at the date above mentioned, the nurseries about Marietta, and the only one near Zanesville, were permitted to run down, and were not succeeded until recently by other good ones; so that for more than twenty years there were no nurseries, of any note, within a reasonable distance, or accessible to the citizens of this county; and that even now, they are under the necessity of procuring trees from the nurseries of Marietta, Coshocton, Columbus, Cincinnati, and Cleveland, he will understand the reasons why most of these orchards contain natural fruit only. Some of our earliest settlers planted orchards of grafted apple trees, and these trees were of choice varieties, because, at that time, no other trees could be procured, had their inclinations led them to a different selection. Those varieties have been propagated, and hence our standard apples are, *Summer; Bracken, Early Chandler, Summer Sweets, Pound Royal of Marietta, (Dyer) and Red Streak; Autumn; Rambo, Holland Pippin, Winter Russets, Yellow Bellflower, Spitzenburghs of Marietta, Vanderweres, (Red, Green and Yellow); Red or Long Pearmain, Red Winter Pennock, Black Gilliflower, Newtown Pippin, Westfield Seekno further, Rhode Island Greening, and Romanite.* To these, many others have been added, but are not much cultivated.

THE BRACKEN.—Found as a seedling in 1812, on Bracken Creek, Bracken county, Kentucky, by Mr. William Pitt Putnam, of Belpré, Washington county, Ohio, introduced into his nursery, and extensively disseminated thence by him, and from other nurseries by others. It is our earliest apple, ripening in June and July—has been confounded with Prince's Early Harvest and the White June-eating. The leaf, wood, tree and fruit, in all their peculiarities, are the same as those of the Prince's Early Harvest, brought from Prince's Nurseries, New York. It is strictly a dessert fruit, and not very good for the kitchen. Where each limb leaves its supporting stem, there is a navicular projection, which is claimed as peculiar to both these varieties.

EARLY CHANDLER.—Brought from Pomfret, Conn., in 1796. Good for culinary purposes, 4th July, and continues to ripen six weeks. Said to be too acid. Those who make the remark, have probably never seen this variety in perfection, when grown on a moist, rich soil.

SUMMER SWEET.—(*High Topped Sweet-ing.*)—This earliest of sweet apples can not be dispensed with—Pound Royal, of Marietta, and Kenrick, Dyer, of Connecticut and Rhode Island, Pomme Royal, of Downing, has no superior of its season, August and September, when grown on rich, moist land, and partially shaded. Grown on uplands, with a full exposure, it is more acid, and not so tender.

RED STREAKS.—One variety of these is probably the Early Queen of Philadelphia. A very early, tart, dessert fruit.

AUTUMN RAMBO.—Too well known to need description. Ours is the Rambo of Mr. Downing. The trees overbear every second year, and generally break with their burdens.

HOLLAND PIPPIN.—Usually called Fall or Golden Pippin. Superior for cooking and drying, and admired by many for eating, in early winter. Those who have them will not consent to dispense with them. All the above described are annual bearers.

WINTER RUSSET.—(*Putnam, Boston or Roxbury Russet.*)—Origin, Litchfield county, Connecticut. For fifty years these apples, when grown on the bottom lands of the Muskingum and Ohio rivers, have had no successful rival. When grown on stiff clay lands, they are frequently found too acid, and deficient in flavor.

YELLOW BELLFLOWERS.—These, too, require a rich, moist soil, and a rather warmer climate than ours, to give them that beautiful orange color, and mild acid flavor, which renders them such favorites about Cincinnati. With us, they are generally too acid. **SPITZENBURGH**s of Marietta—of little value.

RED AND LONG PEARMAIN.—This much abused variety is, with us, much admired by many. It is a superior cooking apple, an annual bearer—but, bears more abundantly every other year, and in that year, too, when other trees bear but sparingly, or not at all. In the language of a German friend, "these trees bear when there are no apples." In a stiff, wet soil, they are rather poor articles, but the trees pay well for manure placed about the roots.

RED WINTER PENNOCK.—Admired by about one half, and condemned by the other half of this community. Subject to the old "Bitter Rot," it is seldom attacked by the new disease bearing that name. Its cooking qualities are not surpassed by those of any other apple of its season.

The *Black Gilliflower, Newtown Pippin, Westfield Seeknofurther, and Romanites*, are too well known to require any remarks.

RHODE ISLAND GREENING.—Twenty years since, this was one of our principal winter apples. At this time, it is seldom seen in market. On stiff limestone lands, the trees do not produce good fruit. On our richest bottom lands, they run too much to wood, and consequently bear sparingly. They require a freestone soil, without manure.

OTHER VARIETIES.—I have grown and tested the Alexander, American Summer Pearmain, American Golden Russet, American Pippin, Baldwin, Cathed, Esopus, Spitzenburgh, Early Strawberry, Gloria Mundi, Gravenstein, Harrison, Kilham Hill, Large Yellow Bough, Maiden's Blush, Michael Henry Pippin, Nonsuch, Pumpkin Russet or Kingsbury Russet of Ohio, Red Astrachan, Stroat, Summer Rose, Swaar and Talman's Sweeting of Mr. Downing, and find they correspond with his description. Also, the Gate, by him called the Waxen of Cox, or Belmont.

Also, the Pumpkin Sweet, Blue Pearmain, White Italian, White Apple, Norfolk Beaufin, Roman Stem, Wells, Canada Reinette, Red Streak (Winter), Cooper, Genneting, (Summer) Sweet Harvey, Rambouillette, Black Pippin, of Indiana, Orange Sweeting, Summer of Columbus, Rome Beauty, and others of various writers. I have also about two hundred other varieties in the course of being tested.

Remarks on the above.

The *Pumpkin Russet*, is the Kingsbury Russet of Ohio. Subject to large transverse cracks, with black rotten edges.

The *American Golden Russet*, of Indianapolis, is identical with Rev. C. Springer's Little Blue Pearmain, but I think is not the Sheepnose of Cox.

The *Roman Beauty* is a seedling from the old Nursery of Israel Putnam, of Union, Washington county, and not of Rome, Lawrence county. It is a beautiful reddish apple, thick skinned, and not affected by "rot," or pock, even on trees where this disease prevails; as I have proved for three years in succession. It is an annual and abundant bearer.

Gloria Mundi, or Monstrous Pippin, is not worth the room it occupies any where, except as a curiosity, on account of its

immense size. Trees poor bearers, and fruit worthless.

HARRISON.—This variety, so celebrated, formerly, for cider, is now scarcely worth cultivating, except for its long keeping, annual bearing, and fine baking qualities, in March, April, and May. In exposed situations, the fruit remains untouched, while all others are stolen.

COOPER.—This is an Eastern variety, sent to Ohio in 1796, and so much altered by our soil and climate, as not to be recognized by our eastern friends. It ripens in September, October, and November, and in a stiff clay soil, is a splendid apple, remarkable for size and beauty. Grown in such soils, it is not recognized by those who plant it on rich bottom lands.

GENNETTING, OR SUMMER GENNETTING.—This is an early summer apple, acutely ribbed, rather tart, and forbidding in appearance, when not fully ripe; greatly improved by lying a few days after being pulled, when it becomes tender, and of a beautiful straw color. Good for cooking, July and August.

SWEET HARVEY.—There are several varieties of apples cultivated under this name. One, and probably the true one, resembles, in external appearance, the Rhode Island Greening; ripens in September. Another, by some called the Sugar Sweet, has numerous indentations in the skin, beneath which there are brown spots in the flesh, which have the same appearance as the "bitter rot" in the Red Winter Pennock, but these spots are not very bitter. Such of this variety as remain on the trees at picking time, will keep till May.

WHITE APPLE.—A very agreeable, juicy, subacid variety, ripening in September and October; a second rate fruit.

The **RAMBOUILLETTE**, of Judge Wood, is the same as our Rambo.

ORANGE, OR GOLDEN SWEET OF COLUMBUS. Ripens in July and August. Does not correspond with descriptions of authors in size or appearance. Has a strong aromatic flavor. I have found it the present year in some of our oldest orchards, taken from the Marietta nurseries. A very superior fruit.

STONN'S SWEET.—An apple grown in this place, has been disseminated, and is now offered for sale by some nurserymen, under the above name. During the present season I have traced it back to Hill's Nursery, on the

little Muskingum river, Washington county. It is large, flat, green, until fully ripe—then yellow—ripening last of July and first of August. Fine for baking. The leaves of these trees distinguish them at first sight, being from four to six inches in width, and from six to eight in length. What is it? Probably an old eastern variety.

SIGLER'S RED.—At the Ohio Fruit Grower's Convention, in 1848, I presented an apple which was much admired. Knowing no name, it has been circulated as Sigler's Red. I now believe it is the Autumn Pearmain, of Mr. Downing.

WHITE ITALIAN.—This variety I obtained from Cleveland. Specimens are herewith presented. I think it is not the same as the White Italian of Mr. Kenrick.

In addition to the foregoing, there are numerous other varieties of apples cultivated in this country. A large number of sweet varieties are being introduced for man and for stock.

The new "Bitter Rot," or Pock, is now rapidly extending in our orchards, and in some, literally sweeping all the late fruit. Turning in hogs, to eat the affected apples, is generally resorted to, but they can not eat them as fast they fall, and if much affected, they will not touch them; consequently, they are left to rot on the ground. The disease is thus increased and extended. Lime, ashes and stable manure, appear to be the only remedies for mitigating this disease.

I find by experience, that Hornets, Wasps, Bees, Yellow Jackets, Locust-borers, Ants, Tumble Bugs, Grasshoppers, and other insects, wound many of our best apples, when they change color, or commence ripening, and thus cause them to rot and fall prematurely.

S. A. BARKER.

McConnellsville, Sept. 25th, 1850.

THE extracts from the proceedings and reports of the Pomological Congress, that held its last session in this city will be considered so valuable to the fruit-growers, that a larger space shall be devoted to them in the next number. The florists and general reader will not take exception to this—their turn will come at another time.—Ed.

METEOROLOGICAL TABLE, EXTENDING THROUGH THIRTY-FIVE YEARS.

Year.....	Greatest daily variation.		HOTTEST DAY IN THE YEAR.				COLDEST DAY IN THE YEAR.				Av. of year.	WHITE FROST.		WINDS AT NOON.							
	Deg.	Mo.	Sunrise.	Sunset.	Month and day.	Mean ..	Sunrise.	Noon...	Sunset.	Month and day.		Mean ..	Last in Spring.	First in Autumn	NORTH..	N. East.	N. West.	S. East.	S. West.	East....	West....
1814	40	3	73	95	80 July	5 82	4	18	16	Dec 19	13 53	May 17	Oct 7	16	9	33	63	31	117	27	69
1815	40	4	79	94	82 " "	30 81	10	7	5	Jan 30	2 52	" 20	" 9	27	12	32	59	20	106	19	90
1816	43	5	71	96	82 Aug	25 79	8	9	7	Feb 8	7 52	" 15	" 8	13	4	23	59	28	153	21	65
1817	39	5	72	95	75 July	29 78	10	5	1	Jan 18	2 54	" 21	" 10	31	6	22	62	42	145	14	43
1818	37	3	77	95	80 Aug	25 85	10	4	0	Feb 9	2 51	" 5	" 5	26	9	13	48	44	159	19	47
1819	40	6	74	94	82 " "	5 82	6	10	8	Dec 31	8 54	April 22	" 11	19	19	41	47	36	127	23	53
1820	42	6	72	98	84 " "	11 82	10	15	12	Feb 1	6 53	May 9	" 12	15	26	54	46	36	110	12	67
1821	39	10	77	94	80 " "	2 82	10	11	3	Jan 25	4 51	April 19	" 9	11	33	59	25	59	119	11	48
1822	40	4	75	92	80 July	7 81	10	4	4	Dec 3	8 53	" 29	" 13	2	27	82	16	63	132	12	31
1823	44	10	76	94	83 " "	2 81	10	8	5	Feb 7, 8	1 53	May 6	" 22	5	22	90	16	36	150	18	28
1824	38	2	79	94	84 June	29 84	10	7	6	Feb 1	1 53	April 30	" 15	4	33	93	17	50	136	5	28
1825	40	4	74	97	82 Aug	14 83	2	17	16	Dec 13	10 54	May 2	" 18	2	44	89	13	58	142	5	12
1826	38	4	74	94	80 May	2 82	10	6	0	Jan 24	1 54	April 30	" 26	33	97	19	74	124	3	15	
1827	37	2	74	93	82 July 1, 11	81	5	7	5	" 1, 18	3 53	May 8	" 17	4	45	98	5	59	138	6	10
1828	39	7	79	93	82 Aug	5 84	7	16	15	" 21	13 55	" 8	" 2	3	31	90	3	45	186	1	7
1829	33	3	74	93	80 June	27 80	2	10	8	Feb 12	5 51	" 13	Sept 8	2	30	108	3	55	155	1	11
1830	42	9	74	96	84 July	18 82	10	2	5	Dec 21	6 54	" 25	" 18	2	26	97	6	54	165	4	11
1831	38	4	66	95	80 Aug	11 70	10	4	0	" 15	2 43	" 25	" 28	1	31	80	3	58	169	4	19
1832	41	4	74	97	82 June	10 82	10	2	4	Jan 25	5 52	" 25	" 23	4	60	6	50	173	1	10	
1833	42	4	76	95	80 July	20 82	5	10	7	Mar 2	5 53	April 9	Oct 4	44	80	12	67	143	7	12	
1834	40	5	78	97	87 " "	22 86	9	5	4	Jan 5	1 53	" 26	Sept 26	5	43	96	4	55	133	7	22
1835	38	4	72	91	80 Aug	12 80	10	4	5	Feb 7	6 50	May 16	" 15	44	75	2	57	158	2	27	
1836	40	5	70	93	82 July	31 80	10	8	3	" 1	0 50	" 10	" 30	43	85	9	65	133	7	24	
1837	30	4	74	91	82 " "	12 78	0	12	10	Jan 3	7 51	" 20	" 23	1	27	88	1	62	161	1	24
1838	42	9	75	95	85 " "	18 83	10	6	4	Dec 23	0 50	" 26	" 3	1	33	67	4	57	165	3	25
1839	39	4	76	92	84 Aug	10 82	10	8	12	Nov 25	3 55	" 4	" 13	39	93	4	61	134	3	31	
1840	34	11	73	91	83 J. Jy, A	80	4	10	12	Jan 16	6 53	April 20	" 12	4	38	92	10	53	105	5	49
1841	37	3	78	90	85 June, Jly	84	10	1	1	" 18	3 53	May 8	" 30	4	48	77	15	67	103	5	46
1842	35	8	75	88	82 July	14 81	0	10	11	Dec 23	7 53	" 5	" 23	12	39	51	31	13	106	31	50
1843	28	4	75	88	87 Sept	11 83	0	10	11	Feb 1	7 50	April 10	Oct 13	32	28	49	37	49	94	24	52
1844	30	4	77	87	82 July	1 80	1	13	10	Jan 29	7 54	" 30	" 7	22	26	53	28	52	102	27	56
1845	39	9	74	87	85 " "	6 82	10	2	3	Dec 10	5 53	May 8	Sept 20	26	20	45	46	39	103	20	66
1846	36	4	80	90	85 " "	21 83	0	11	14	Feb 26	8 55	April 13	Oct 18	29	36	34	57	40	69	43	57
1847	33	4	74	85	82 July, Au	79	2	6	6	Jan 19	5 53	May 5	" 13	31	26	37	62	31	86	36	56
1848	29	3	75	86	84 July, Au	78	10	6	10	" 10	6 53	April 27	Sept 22	35	23	49	57	13	78	26	55

This exceedingly valuable Meteorological Table, was kept in an elevated region near this city, by the late Mr. J. H. Jackson, father of our intelligent Florist, S. S. Jackson, to whom the Editor is indebted for the privilege of inserting it in these pages, where it will be preserved for future reference and comparison.

The reader will find in the several columns, the greatest daily variation of the Thermometer and the month in which it occurred; the hottest day of each year, with three observations and the mean; the coldest day similarly noted; next, the average temperature of the year. The next columns note the earliest and

latest frosts at either end of the growing season. Then follows the direction of the winds.

In the other half of the table, will be found the number of days when the wind was West-erly, the number Clear, Cloudy, Rainy; the Snows, Electrical phenomena and Fogs.

Then comes the date of the Peach blossoms, which has varied as much as 42 days, occurring once so late as the first of May, and failing utterly four times. The condition of the Crops of various kinds, fruits and grain, is noted, and miscellaneous remarks follow, making this one of the most interesting tabular statements that has ever been presented to the public, in a popular form.

Year.....	Days of West. winds in year.	WEATHER.					Peach Trees Blossom.	CROPS OF VARIOUS KINDS.					
		Clear.....	Cloudy....	Rain.....	Snow.....	Fog..... Th. and Lt.		APPLES.	PEACHES.	PAPAWS.	MAST.	WHEAT.	CORN.
1814	249	186	59	95	25	19	18	April 2					
1815	228	19	64	94	16	16	12	Mar 26					
1816	241	205	70	81	10	10	4	April 7					
1816	210	171	75	103	16	5	4	" 13					
1818	219	184	84	81	16	9	2	" 15	good	v great	plenty	good	middling
1819	221	182	65	94	24	7	5	" 11					
1820	231	220	51	76	19	19	5	" 9	scarce	v scarce	v scarce	"	"
1821	226	204	46	90	25	15	3	" 15	plenty	scarce	v plenty	v bad	"
1822	245	197	42	113	13	14	7	" 4	scarce	"	v scarce	light	"
1823	266	185	49	119	12	17	5	" 13	plenty	"	v plenty	middling	middling
1824	257	184	74	96	12	16	2	" 13	plenty	plenty	scarce	light	good
1825	243	205	61	96	3	17	9	Mar 31	none	none	v scarce	middling	"
1826	236	200	48	104	13	24	11	April 15	plenty	plenty	plenty	good	"
1827	246	172	70	101	12	28	11	" 3	plenty	"	plenty	middling	"
1828	283	181	65	116	4	21	6	Mar 25	v scarce	none	"	"	"
1829	274	174	66	107	18	29	8	April 28	plenty	plenty	"	good	v good
1830	273	194	74	87	10	29	10	" 5	none	scarce	scarce	v good	bad
1831	268	169	91	89	16	20	8	none	plenty	none	"	light	"
1832	263	191	77	85	13	15	5	few, Ap	scarce	"	little	v fine	g and b
1833	235	197	72	84	12	20	8	April 9	v plenty	plenty	rath scar	good	good
1834	251	216	62	82	5	21	5	" 6	none	none	very few	"	g and b
1835	260	192	70	93	10	27	8	" 25	v plenty	a few	scarce	bad	middling
1836	242	197	69	89	11	17	9	" 26	scarce	"	scarce	"	"
1837	273	196	71	83	15	25	10	" 20	plenty	plenty	plenty	"	good
1838	267	218	58	75	14	28	2	none	very few	none	scarce	good	middling
1839	258	200	92	64	9	21	4	none	none	"	b m pl	v good	"
1840	246	186	77	91	12	27	5	April 8	plenty	v plenty	"	good	"
1841	226	190	82	79	14	19	5	" 25	scarce	scarce	plenty	middling	"
1842	209	202	75	81	7	22	8	Mar 21	v plenty	plenty	"	good	good
1843	195	174	88	88	15	18	2	May 1	plenty	"	"	"	"
1844	211	173	86	95	12	30	4	April 6	scarce	scarce	"	middling	middling
1845	214	205	55	95	10	18	5	none	"	"	"	"	"
1846	160	179	82	90	14	20	4	April 12	"	"	mid	good	good
1847	179	193	57	101	14	29	9	" 14	"	"	good	"	"
1848	182	195	80	84	7	12	7	" 10	plenty	"	scarce	mid	"

MISCELLANEOUS REMARKS.

1815-June 16. Heavy rain ; creek highest known.
 1817. Locusts appear in April.
 1819. Very dry summer.
 1820. Very dry fall.
 1825. Spots on sun in August. Comet in September. Weevils destroy wheat, and injure most other kinds of grain.
 1826. Some weevils in wheat.
 1827. No weevils this year.
 1828. A few weevils.
 1829. Very plentiful crops, except buckwheat.
 1830. Very dry summer.
 1831. Wet ; the average of the year ten degrees colder than before.
 1832. Ohio very high in February. Cholera in Cincinnati.

1833. Very good crops. Cholera.
 1834. Very hot summer. Locusts in May. Cholera in Cincinnati.
 1835. Hard frost in May, but no damage.
 1836. Fruit scarce, except currants.
 1837. Fruit plenty ; potatoes bad.
 1838. Little fruit. Wells dry in September and December.
 1839. Little fruit. Wells dry most of the year.
 1840. Fruit plenty where it failed last year.
 1841. Fruit scarce except papaws.
 1842. Fruit very plenty.
 1843. A comet in March.
 1844. A blight on apples and pears.
 1845. Bad fruit year.
 1847. Great flood, December 17.

NORTHERN SPY APPLE.

Mr. A. H. ERNST, *President*
Cincinnati Horticultural Society.

DEAR SIR: For the purpose of having the members of the Cincinnati Horticultural Society test the "Northern Spy" Apple when in perfection, I herewith send you a box of the fruit, which please accept.

Out of the immediate vicinity of Rochester, it is not as yet extensively grown, and consequently many are strangers to the apple.

You will notice that those sent are of high color, and were grown on trees which were well pruned. The tree is an upright grower, and the branches need to be thinned out to give the fruit the sun. It is also very thrifty, and a good bearer. No more profitable apple is grown—and it will command from \$2 to \$2.50 per barrel, in the fall of the year, from first hands, and has been sold during the winter in this city, at \$3.

Lovers of good fruit here are sure to secure a supply, so that a certain quantity will always sell in this market; and any surplus has heretofore found its way to the Boston market, where the apples have sold at \$6 per barrel, and by retail dealers at \$1 per dozen—price enough, surely. It keeps in fine order until June, provided the fruit has been put into clean and sweet barrels, and kept in a cool cellar. The reputation of the apple is so well established, that growers who raise for sale, are grafting largely into their old trees. Of a beautiful red color—juicy, very crisp and fresh to the taste, when taken from the barrel, I know of no substitute for it as a keeper, or for quality.

My experience with this fruit—having purchased and sold at different times some six hundred barrels—and having taken pains to notice the tree, in its growth and productiveness, I hesitate not to recommend its cultivation to any extent.

Wishing you, dear sir, and the gentlemen associated with you—lovers of horticultural pursuits—every success in your endeavors for the discovery and growth of good fruits,
I am, respectfully, etc.

JAMES H. WATTS.
Rochester, N. Y., March 11, 1851.

In this connection, the subjoined extract from the *Genesee Farmer* is inserted:

We publish the following, with pleasure, from Mr. Watts, who is one of the most tasteful amateurs in our city. He has a fine garden, well filled with fruits and flowers; and amid all the cares of an active business life, finds it a source of much pleasure. Long may he live to enjoy it. The fruit-growing world are indebted to him for his earnest efforts in bringing to notice, and disseminating fine fruits.—*Genesee Farmer*.

MR. BARRY: In the February number of the *Farmer*, 1845, you gave the public an interesting account of the "Spy" Apple. As that paper may not be seen by all who wish to cultivate the fruit, and have it, I wish you to join me in noticing the apple and tree again. I have what follows from Mr. O. C. Chapin, of East Bloomfield, N. Y., who kindly furnished the particulars.

He says that the seeds were brought from Connecticut, in the year 1800, and planted by a Mr. Elisha Taylor. (It would be interesting to know if an apple bearing a resemblance to it is now known in Connecticut.) The original tree was set in an orchard by Mr. Heman Chapin, and some sprouts from it were transplanted by a Mr. Roswell Humphrey, and by him the first fruit was raised, as the original tree, from some cause, died, East Bloomfield has, then the honor of producing the first fruit in this region. It would be gratifying could we know why Mr. Humphrey or Mr. Chapin gave it the name Northern Spy. (I hope Mr. Chapin, when he sees this, will try to learn the reason.)

In your article you mention the tree as being thrifty, rapid and upright. Mr. Chapin confirms it, and says, "it bears well every season, and that a portion of the apples are as good as any they have there, and under

favorable circumstances, the apples will keep until June." What a valuable property this is; and to be so fresh at that season.

He adds: "There is but one objection to it. A large proportion of the fruit is small and scrubby, and of little value." This we are sorry to learn; nevertheless, what good fruit there is, is superior in size, beauty, flavor, and general appearance, and will *keep*. Many inquiries have been made about it, and the numerous calls I have had, to purchase and see samples of it, show what an interest is taken in it. I trust that if the trees bear but few, that more, on that account, will be planted, to make up, in that way, for its scarcity, as well as by grafting.

I am, very truly, yours,

JAMES H. WATTS.

Rochester, Jan. 25, 1847.

N. B. In the debates at Albany, at the meeting of the State Society, I see most honorable mention is made of the "Spy." The pleasure I have had the past season in distributing them (some sixty-five barrels, sent all over the country,) is much added to by finding them so well appreciated.

Yours,

J. H. W.

—
This communication, coming from headquarters, will be looked upon as authority, and Mr. Watts has the thanks of Western Pomologists for the information supplied. His promised notices of superior fruits will be gladly received—one is already in type for the next number, which gives us information little expected from that region.

THE FRONTISPIECE.

We present our readers, this month, with a view and ground plan of one of the handsomest cottage residences in our vicinity.

Within the past three or four years there is a manifest advance in the style, taste, and—what is of as much consequence—interior arrangement, of our suburban residences.

This dwelling stands on a fine eminence, some three miles east of the city, near Rookwood, commanding a beautiful view of the extensive and fertile fields near the mouth of the Little Miami, the distant Kentucky hills, and of the Ohio river—looking up stream some eight miles.

Those who have been exercised on rural architecture, and have read Mr. Downing's work on the subject, will remember a pretty little cottage at page 149. The exterior is here imitated, the interior distribution being the plan of the owner. The house is 26 by 48 feet, and it is two stories high.

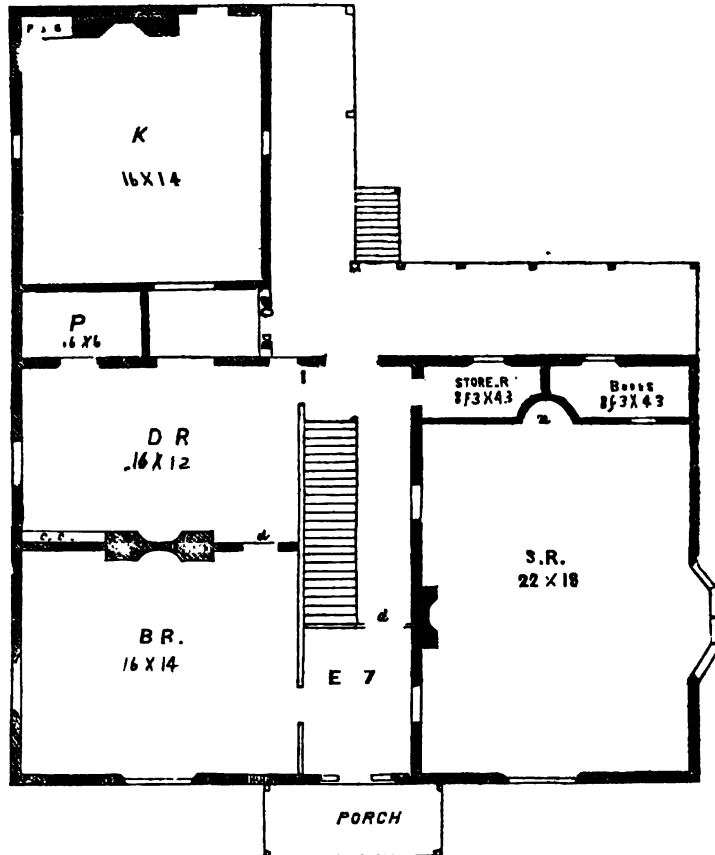
The building is of brick, with stone caps and sills. The whole painted a light slate

color. The effect of the tall chimney tops, the diamond formed shingling, and of the pointed finials, is highly pleasing.

Let us enter, and to begin at the beginning, take a look at the cellar, which is ten feet high in the clear, and extends under the whole house. This is a good foundation, and a means of insuring, to the occupants, good health. The want of an airy cellar is the cause of more discomfort and sickness than could well be told of in a single page.

How often the bricklayer is blamed, carpenter abused, and architect vilified, for effects the cause of which can not be discovered, and that never would have had an existence, if the worthy owner had not economised some thirty dollars on a cellar which was "of no use?"

The height of the first story (eleven feet) is a feature that strikes one favorably, and every body will like its distribution. From the name given to the largest and handsomest room, it may be presumed that it is intended



(very sensibly) for constant occupation—not for occasional display. S. R., the sitting-room, (as shown in the engraving,) is 22 by 18 feet, enlivened by a large bay-window overlooking the grounds, and opening into a little book-room, 8 feet 3 in. by 4 feet 3 in., which has a nice little window toward the river.

On the left of the entrance and passage, which is 7 feet wide, and ornamented exteriorly by a very pretty porch, the house is divided into two rooms, B. R. a chamber 16 by 14, and D. R., a dining-room, which latter, (besides its large pantry, P., and closets c. c.,) communicates, by double doors, and a passage that also opens upon the piazza, with

a very convenient kitchen, K., 16 by 14 feet, a rear building, that is fitted up with every convenience of pump, drain, etc., to fascinate the dispenser of culinary blessings who may happen to preside therein. The back building, and the south side of the house, are provided with delightful piazzas, from which the inmates descend by steps to the ground.

One of the most fatal *cockneyisms* in the building of country houses by city gentlemen, is the introduction of a so-called *Library*—a good sized room, generally obtained by sacrificing some useful apartment, and which, so far as a limited observation goes, has of the library nothing but the name. Several could be found, however, which, by an accumula-

tion of odds and ends, boots, trunks, dried fruit, etc., have become *litter-ary* in a high degree. Now it may possibly be a wrong view of this matter, but the snug little room for books, pamphlets, and writing-desk, within reach of the warmth and cheerful influences of the family hearth, is much more agreeable to a social being, and presents inducements for reading not found in a travel through cold entries to a distant room in search of a volume.

The chimneys are grouped near the center of the house. By this arrangement, every particle of heat is usefully expended within, and not wasted on the exterior walls. To architectural eyes it has, moreover, another advantage—that of breaking the monotonous line of roof, and rendering the hitherto unsightly things ornamental.

When looking at the painter's elaborate and expensive process of *graining*, in imitation of oak and other woods, it has often been a subject of surprise that the obviously shorter road was not taken, viz., that of giving us the wood itself. In other words—instead of covering our white and yellow pines, or white and black walnuts with unmeaning paint, or the sickly imitation of mahogany and other foreign woods, why not give us the thing itself, the naked truth?

The woods named are all in common use,

and all of them beautiful. Here, I was surprised to find even the least variegated of them—the white pine—more beautiful than could have been supposed. The whole interior finish of the house (with the exception of the banisters and handrail, which are of oak) is in white pine, varnished. All its natural variety of veins, color and grain, which deepen with age, are thus preserved, and to the eye of taste, is incomparably preferable to the glaring white paint. Then there is no doubt that the housewives would declare for the varnished wood—no more suds, and rubbing and scrubbing, to make sightly the stain retaining paint. A wet sponge passed over your varnished door leaves it perfectly clean. The white paint, moreover, needs constant renewal, and will not bear the absence of light, as many know, who have shut up a freshly white painted room in spring, and found it in September as yellow as the falling leaves.

The store room and pantrys are good features, and furnish a great deal of that accommodation which a good housekeeper in the country so well knows how to appreciate.

The second story contains one large room, (21 by 17,) and three small chambers, which are handsomely lighted by means of the gable windows that give so much character to the steep roof externally.

THE XENIA SPRINGS.

A VISIT to this delightful place was described in the 6th number, in an article upon Summer Retreats. The charms of this agreeable spot can not be too highly extolled, and must be seen to be realized.

They will be visited by many of our citizens during the coming season; and some are already constructing their cottages upon the beautiful sites that are embraced within

the grounds—may an editor aspire to enjoy such a retreat—why not? Look out, then, for a fancy Bungalow on one of the gravelly spurs—in the deepest shade, and most retiring nook.

The following notice is from the Xenia Torch-Light:

We took a ride out to the Springs of Mr. Drake and others, a few days ago, for the

first time since operations in the way of improving and embellishing the grounds have commenced, and were so highly pleased with the locality and the extent to which improvements have been made, and are making, that we can not refrain from once more briefly alluding to them. The attractions of the place are certainly much greater than we have heretofore thought them; and if all the improvements in progress and contemplated are fully carried out, of which there can be no doubt, it will be one of the most pleasant and healthful watering places to be found in the Union. Nature has certainly done as much toward fitting out this spot for a pleasant summer retreat, as any place we ever saw, and the owners have manifested a disposition to spare neither labor nor means to make it in the highest degree attractive.

The hotel building is a magnificent edifice, and will possess all the facilities and conveniences to be found in the largest and most carefully-planned hotels of the cities. An idea of its size and capacity may be formed when we state that it is the largest frame dwelling in Ohio, or probably in the Union; and will be one of the most handsome. This building the contractor is bound to have finished about the first of June next. It will probably open with a ball about the 10th of the same month, on which occasion we anticipate such a gathering together of the youth and beauty of the West as has never yet been witnessed.

The Springs are but three miles from town, and persons wishing to visit them will find the road an excellent one. A good trotting horse will make the distance with ease in 20 minutes.

THE Committee to select a name, have had two sittings, and after carefully examining more than three hundred offerings, all of which were, no doubt, considered *sure* to win the cup, they were driven to the conclusion that it would be the best policy to preserve the local cognomen, found at the head of this article. Among many very pretty names, the Committee selected as most appropriate *Luteola*, yellowish water, *Teloola*, falling water, and *Ta-wah-wah*, clear water, and were for a long time unwilling to allow them to pass.

It was finally suggested to apply the last, *Ta-wah-wah*, to the main spring, while the more familiar appellation is applied to the locality, including the more vulgar ideas of eating, sleeping, waltzing, or lounging, etc., at the Hotel. The sentimentalists must ramble away through the shades of the noble forest, and over the beautiful knolls and among the deep dells, when they wish to appreciate the beautiful effect of the sweetly sounding Indian title—*Ta-wah-wah*.

TO CORRESPONDENTS.

P. BARRY, Rochester, N. Y.—I am sorry that I can not answer your query about the apple of which you send the outline and description, from which I strongly suspect that it was the Newtown Pippin; as some magnificent specimens of that variety, kept in the Horticultural rooms all winter, were perfectly firm, and had lost all their flavor a week or two since. Had it none of the ear marks?

Our western pomologists will be gratified to hear what you say of our fruits, so a part of your letter is appended. With regard to the proceedings of the Pomological Congress,

they will be found very meager, on account of the difficulty of rendering the stenographic record, in the absence of the reporter, who had gone to Ireland. Mr. Elliot was obliged to make up the history in a degree, from recollection. It is hoped no blame will attach to the secretaries on this account, as they very naturally depended upon the reporter.

"I have eaten to-day my last specimen of the famous 'Rawle's Janet,' and I am much pleased with it. It was perfectly sound, and its flavor quite unimpaired, although it tra-

veled a long journey, and passed through many hands. I have put it down as a fine apple for the West and South at least. I ate the *Boheman* in January, and it was then fine—of a deep orange yellow. The *White Belle-flower*, or *Detroit*, is sound and fresh yet, of a beautiful lemon yellow, or rather straw color, and a specimen cut proves to be one of the highest flavored fruits I have tasted this season. *Rome Beauty* keeps well—sound and fresh yet; good, but not high flavored.

I see by a list of rejected fruits in your April number, that the *Spanish Bon Chrétien* was thrown out by the Pomological Congress. If I had been present, I should have voted in its favor—for it proves here a hard, prolific variety—very beautiful, keeps well, and cooks admirably. I esteem it useful.

I am anxious to see what was said of it, and by whom, as I was absent at the time.

I must take this occasion to congratulate

you on the success of your excellent Horticultural Review. Truly yours,

P. BARRY.

Rochester, April 19th, 1851.

J. H. WATTS, of Rochester, New York, is thanked for his communication on the Northern Spy apple, and referred to the above for home news of the Rawle's Janet; it is now rather late to send them on, but the first opportunity shall be embraced.

L. S. MORE, *West Milton, Ohio*, will find his queries respecting Mr. Longworth's seedling strawberries, answered on another page.

The kind procured of W. J. Thomas, Troy, is probably the Neck-Pine, of our market—a most prolific and valuable variety—quite different from the Hudson, which furnishes the large proportion of this fruit sold in our markets.

Burr's New-Pine is remarkable for its flavor.

TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY.

DURING the past month, there have been several excellent meetings, the attendance good—and discussions of a spirited nature were elicited.

On the 5th of April, the Wine Committee read an elaborate report of their labors, which will be found in full upon page 380 of this number. Their awards were confirmed by a vote of the Society, and thanks rendered to the committee for the judicious and satisfactory manner in which they had discharged their duties.

Specimens of wine were exhibited during the month, from a distance, as well as from our own vignerons. Those from Clinton Fay, Chatauque county, N. Y., were too sweet to meet the commendation of the committee.—In this connection, it should be noted that in the table accompanying the wine report,

page 382, the last column, marked specific gravity, is the result of very careful examination with the wine-scale of the society, made by the secretary, with the valuable assistance of the excellent chemical manipulator and analyser, Charles H. Raymond, M. D.

Fruits have still been exhibited, the product of the past year—and among them the Rawles' Janet stands pre-eminent.

On the 26th, was presented the "Canon apple," from M. Fowler, Preble county, O., very fine and sound; it was pronounced *good*.

On the 5th of the month, the President exhibited a box of apples, for which the society are indebted to James H. Watts, of Rochester, N. York, the intelligent and persevering patron of the celebrated Northern Spy apple—and the supporter of all good fruits; to whom the members will gladly con-

for the simple favor he asks, of sending specimens of good varieties they may have.

The interesting communications accompanying this box, and relating to its contents, will be found on page 396. The specimens themselves having been referred to the Fruit Committee for immediate action, they made the following brief report, which was fully concurred in, as to its flavor:

MR. PRESIDENT AND MEMBERS:—We offer the following report upon the apples referred to us from James H. Watts, of Rochester.

The "*Rez Russet*" is not known to us; the single specimen is fair, smooth, of good size, it is but a second-rate russet apple.

The *Pomme Grise* is not known to us, but is a very good flavored apple of small size.

The specimens of *Swaar* are correct, and we think it ranks among our best apples.

The *Northern Spy* is a superior fruit; the specimens before us are large, handsome and highly colored, and we consider it a first-rate apple in many respects, though not equal to the Newtown Pippin nor Rawle's Janet, in point of flavor. It is true, these specimens have been confined in a pine box, and were not securely packed; they are bruised, and beginning to decay; they would probably be better if kept as Mr. Watts recommends in his excellent communication, for which, as well as for the fruit, our society are under obligations to him. We recommend the *Northern Spy* as worthy a place in the best selections.

M. McWILLIAMS, } Fruit Committee.
S. M. CARTER, }

Among the other apples presented in good condition, the following should be noted:—Rawle's Janet, Newtown Pippin, Lansingburgh, Milam, Rhode Island Greening, Red Bellefleur, Virginia Greening, and Campfield.

CATAWBA GRAPES, in a perfect state of preservation, with all the bloom unsullied, were exhibited on behalf of our successful friend, C. Carpenter, of Kelley's Isle, in Lake Erie, accompanied by the following letter, descriptive of the method pursued for their preservation:—

Kelley's Isle, O., April 10, 1851.

DR. WARDER—I send you a few bunches of Catawba grapes, hoping they will arrive in good order. In the last five years, I have tried various methods of keeping them—such as between layers of cotton, in stone jars, in boxes, baskets, etc. These were placed in a stone jar with a paper tied over the top, and set in a warm cellar which was not sufficiently ventilated in the early part of the winter; in consequence of which every thing was soon covered with mold, and my grapes, apples, etc., were injured thereby. The result of my experience may be summed up thus:—Cover just enough to prevent them from shrivelling, set in a cool place, above ground or below; and above all, handle carefully when picking and packing, for every one in the least started from the stem will rot. When well managed, they keep better than apples.

C. CARPENTER.

Tempting as were these beautiful berries, they remained untouched by the members, and were presented to Mad'le Lind, who had just landed in the city to commence her course of conquests among us.

FLOWERS—have graced our tables, at every meeting; the beautiful ornaments of the green house, the early and hardy harbingers of spring from the gardens and borders, and also, not least welcome, the lovely offerings of the woods and glades, which are so richly deserving the horticulturist's fostering care. Twenty-five varieties were exhibited by W. Orange, at one time, among which several were very beautiful.

The Verbenas, of new and striking patterns, exhibited by S. S. Jackson, embracing the best French varieties, were much admired. His roses, too, have been very attractive. A very fine bouquet was presented on the 21st, to the distinguished Cantatrice, who acknowledged its receipt from the hands of the little florists, John and Isaac, in the following note:

Cincinnati, 20th April, 1851.

MY DEAR SIR—Accept my sincere thanks for the splendid bouquet of roses you so

kindly sent me, as well as, more particularly, for the kind letter accompanying the same. I hardly recollect having ever seen a more beautiful collection of flowers, and it highly gladdened my heart to look at them.

I am, dear Sir, yours truly,

JENNY LIND.

S. S. JACKSON,
Cincinnati Floral Gardens.

Besides the regular periodicals taken by the Society, the following works have been received: The Essex County Agricultural Society's Transactions, from Benj. S. Porter, V. President, Danvers, Mass; Transactions of the Darlington (England) Horticultural Society, donor unknown; and the valuable Reports of the Ohio State Board of Agriculture, for 1850, for which the Society is indebted to L. Broadwell, Senator.

At some of the meetings during the past month, the attention of the members was directed to the stawberry blossoms. It was alleged that of certain plants which had been received direct from Mr. Hovey, as his *Boston Pine*, and distributed by our President to members year before last, some of which had borne staminate flowers last year, were now showing pistillate blossoms. The identity of the variety was questioned by some members, others had observed that some *staminates* often had one or more of the first flowers pistillate, but this had not been previously witnessed in the Boston Pine. Those members entertaining views opposed to those so decidedly expressed in the Strawberry Report of our Society, caught at this apparent changeable character of the plant, but those who have been the closest and most careful observers, insisted in the permanence of the floral peculiarities of the Strawberry, as set forth in that publication.

The following communication was received from the patron of the celebrated *Strawberry Theory*, and will show how difficult it is to prevent mixing, by the runners, although he

insists as strongly as ever that they will never *change* in the running — his observations are made in beds that are daily seen, and the plants of which were set out last summer with the greatest care, and under his immediate inspection, from beds where constant care had been taken to preserve the separate identity of each kind:

Mr. EARST, President of the Horticultural Society—

I was not present at the last meeting of our Horticultural Society, but I learn that Mr. Carter produced what he supposed to be the Boston Pine, with a blossom or blossoms purely pistillate, which last year, was hermaphrodite. In my own borders, where all our new seedlings are cultivated separate, there is abundant like testimony to prove this favorite theory of our friend Downing. Among my pistillates, I find many male interlopers. If this were a change produced by running, it would be a miracle indeed, for the change in the stem and leaf is even stronger than in the blossom, and I at the first sight discover that the impudent rascal is trespassing on his quiet neighbors, and kick him back into his own bed. The new seedlings raised by Mr. McAvoy and Mr. Schneicke, can all be known by a careful observer, by the difference in the size, shape, etc., of the stem, leaf and blossom.

But this plant of Mr. Carter's may have been the true Boston Pine, which is hermaphrodite in its character. I raised it one year only, and it bore so badly that I gave it no particular attention. It may belong to a rare family of the Strawberry. In raising seedlings some thirty years since, among some thousands, I found one plant that appeared to me to be a miracle. Some of the blossoms were purely pistillate, some hermaphrodite, and some wholly or partially defective in pistils, but perfect in stamens. I have since seen four or five of this character—Duke of Kent, and Eberlein's seedling are of

this rare class. Schneicke's Garden of Eden, Hermaphrodite, has for two seasons borne a full crop of perfect fruit, equal to Hovey's Seedling, in size. This season I have raised it almost exclusively as an impregnator, and paid it special attention. To my surprise the first blossoms of several plants were purely pistillate, (female). Unwilling as I was to believe that the females could have been so thoughtless and imprudent as to get into the beds of the men, I marked the plants, in some of the blossoms when more expanded, the male organs appeared; others remained purely pistillate, whilst the succeeding blossoms were nearly all hermaphrodite, and apparently perfect in both sexes. This accounts for the full crops that this seedling has produced for two years. If it shall sustain this bearing character in future, it will be infinitely superior to the famous Keens Seedling, and Wilmot's Superb, of England, as it will bear a full crop of perfect fruit, of equal size and flavor. The English, with us, will not average one-fifth of a crop of perfect fruit. I have not yet full confidence that Schneicke's Seedling will do it.

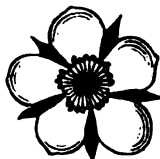
This is the most hardy and strongest growing plant to be found in our vicinity.

Both this and McAvoy's Garden of Eden, Pistillate Seedlings, will have their value fully tested this spring, should not the present cold, cloudy weather end with a severe frost.

Now, what opinion are we to form of the attention paid to the Strawberry in Europe, when they send us, as a prodigy, the small fruited, worthless Bee Hive, whose only merit is, that it is more perfect in both male and female organs, and a better bearer than their larger fruited seedlings? I request Mr. Carter to notice all the blossoms that may hereafter open on his Boston Pine.*

Early pistillate blossoms may this year prove more or less barren, where not in close contact with plants perfect in the male organ, even where not injured by frost. The weather has been so cold that insects have not been flying from blossom to blossom, impregnating the pistillates. N. LONGWORTH.

STRAWBERRY BLOSSOMS.



STAMINATE.



PISTILLATE.

*Mr. Carter reports that his Boston Pine is now fully staminate.—Ed.

COUNTRY RESIDENCES.—A NEW PLAN.

I HAVE already allowed this article to appear in the city papers, but it is here re-produced *without* apology, because it is so coincident with the feelings of many of those who are interested in Horticultural pursuits, and love the country, but have been deterred from these enjoyments by the fear of the toil and expense of keeping up a *country seat*.

Then we have just now an opportunity of gratifying our rural tastes in this very way—W. S. Chapman, the writer of an article upon sun-burnt brick, which appears in the present

number, has laid out a beautiful site for a suburban village near our city—upon one of the most admirable situations that can be imagined, commanding extensive and lovely views of charming valley, hill, and water scenery. The attention of those who are sighing for the country, is particularly directed to this project, as one with which they can not fail to be pleased.

The desire for a residence in the country is increasing, and as our citizens succeed in the attainment of wealth, it will continue to

increase in a far greater degree. This a proper sentiment, and should be encouraged by all means in our power,—both for the mental and physical improvement of the human system. What can or does more effectually elevate and refine the moral sensibilities, than a close observance of, and an intimate relation with, the innumerable beauties of nature, and what more invigorating to the constitution, than the frequent ramblings over the green sward and through the natural forests, together with the habitual copious inhalations of the pure delightful atmosphere of our hill summits?

If our children had the benefit of a life in the country, we should not see so many pale, puny juvenile faces in our streets, nor would parents be so frequently called upon to follow to the grave the remains of their infant offspring.

Is it not a great restorative to the physical energies of the business man; and what so soothing to the mind, after the fatigues and anxieties of the day, as to leave the bustle, dust and smoke of a manufacturing metropolis, and retire a few miles into the country, thus to enjoy with his family, the refreshing breezes, circulating unrestrainedly around his dwelling.

Some few weeks since, I noticed in one of the daily papers, a project for laying out a Suburban Village, with extensive Parks in the vicinity of the city, and I was highly gratified that the true plan had at last been hit upon, for making a residence in the country for our business men a pleasure and even a luxury, at a very small cost, instead of a vexatious and expensive annoyance, as many have found it, from the mistaken idea that a man doing business in town, must have for his residence out of the city ten or twenty acres of land, all of which must be kept up in the most refined style, or the fine effect is destroyed. The prevalence of this notion, has

kept many persons and their families from the enjoyments and benefits of a life in the country.

I should be much pleased to see this idea of a suburban village carried out by the citizens of our "Queen of the West," and I can not better explain it, than by quoting from an article by A. J. Downing, Esq., (who is high authority.) He says:

"The indispensable desiderata in rural villages of this kind, are the following: First. A large open space, common, or park, situated near the middle of the village.

"This should be well planted with groups of trees, and kept as a lawn. The expense of mowing it would be paid by the grass, in some cases; and in others a considerable part of the space might be inclosed with a wire fence, and fed by sheep or cows, like many of the public parks in England. This park would be the nucleus or heart of the village, and would give it an essentially rural character.

"By the possession of a large central space, always devoted to park or pleasure ground, and always held as joint property and for the common use of the whole village, after such a village was built, and the central park planted a few years, the inhabitants would not be contented with the mere meadow and trees, usually called a park in this country. By submitting to a small annual tax per family, they could turn the whole park, if small, or considerable portions here and there, if large, into pleasure grounds. In the latter there would be collected, by the combined means of the village, all the rare, hardy shrubs, trees and plants usually found in the private grounds of any amateur in America. Beds and masses of ever-blooming roses, sweet scented climbers and the richest shrubs, would thus be open to the enjoyment of all during the whole growing season. Those who had neither the means, time, nor inclination to devote to the culture of private pleasure grounds, could thus enjoy those which belonged to all. Others might prefer to devote their own garden to fruits and vegetables, since the pleasure grounds, which belonged to all, and which all would enjoy, would, by their greater breadth and magnitude, offer beauties and enjoyments which few private gardens can give."

"The next step, after the possession of such public pleasure grounds, would be the social and common enjoyment of them. Upon the well-mown glades of lawn, and beneath the shade of the forest trees would be found rustic seats. * * * Little arbors would be placed near, where in mid-summer evenings ices would be served to all who wished them. And, little by little, the musical taste of the village would organize itself into a band, which would occasionally delight the ears of all frequenters of the park, with popular airs."

"Do we overrate the mental and moral influences of such a common ground of entertainment as this, when we say that the inhabitants of such a village—enjoying in this way a common interest in flowers, trees, the fresh

air and sweet music daily—would have something more healthful than the ordinary life of cities, and more refining and elevating than the common gossip of country villages?"

"But people must live in towns and villages, and therefore let us raise the condition of towns and villages, and especially of *Rural* towns and villages, by all possible means."

These are Mr. Downing's views upon country life, and how fully sustained by reason and argument,—and this plan carried out, will give the fullest enjoyment of rural life,—secure the advantages of a good society, a good school and church, and numerous other desiderata for improvement and pleasure.

RESUME.

THE opening article is the last of the excellent papers reviewing a superior work on architecture, which is especially recommended to the reader.

On page 355 are some very practical and excellent directions for the selection of a continued supply of fruit—next comes the Strawberry question, by its great author, with some excellent practical remarks.

Budded and Seedling Peaches are again before us, and some facts that will astonish the opposition.

The Wild Flower calendar is a most interesting record of the opening of the vernal beauties of our woods and meadows.

How to Mismanage a garden is another of the ironical sketches, from the Gardener's Chronicle, full of sound instruction.

Border Plants, will be read with interest and profit by those who are seeking to ornament their grounds. The list of herbaceous and climbing plants, suitable for planting out, will be most welcome at this season.

Sun-Dried Brick—is the adobe of South

America—a new old thing—which appears to promise well; the next number of the Review will be illustrated with a picture of a house built of this material.

Grape Culture in the South is a very welcome article; we desire to know what others are doing with the crop that is becoming so important to us.

Strawberry Culture, p. 385; the Cushing has not proved remarkably productive with our cultivators—though one of the best of the Brincklé seedlings. The Black Prince is a European plant, and, as already stated in a previous number, it is of two kinds—neither of which is of good flavor. The unknown kind obtained for Hudson, is probably our Neck Pine, one of the best for family use.

Advice to Horticultural Societies, contains some excellent suggestions.

Pomological Congress Reports are reprinted as fast as room can be spared for them; the Columbus edition is full of typographical errors, and it is to be regretted that the discussions are reported so briefly.

BOOKS.

THE COURSE OF CREATION: By Jno. Anderson, D. D., with a glossary. W. H. Moore & Co., 118 Main Street.

THE subject of Geology has attracted much attention from the wisest and ablest of men of modern times. Among its most ardent students and teachers, we find many Clergymen. Here is another revered laborer in the same field, who is not unknown to geological readers, but whose charming style must render him a great favorite.

The few sheets which I have seen, have quite captivated me with the writer, and the manner in which he deals with the subject.

The author, with great modesty states, that "if there be any novelty in the volume, it will be found, not in the subject matter itself, nor in the mode of treating it, but by following the geographical sequence in the description of the several geological formations, and their relations to each other in the countries passed over."

The volume is warmly recommended. The style of its manufacture is highly creditable to the excellent establishment of E. Morgan & Co., whence it emanates.

THE FLOWER GARDEN, OR BRECK'S BOOK OF FLOWERS: By Joseph Breck, Boston.

THIS little gardener's manual has just been received. It appears to be very comprehensive, admirably arranged, and well conducted, as every one would expect from the hand of its worthy author. Some of the articles shall be extracted, which the reader will find of sufficient value to induce him to purchase the work.

SCHENCK'S GARDENER'S TEXT BOOK.

THIS little manual is a multum in parvo, neat and convenient, and will prove quite a desideratum to those gardeners who need a book of easy reference, as it is alphabetically arranged, and may be consulted in a mo-

ment, upon any of the multitude of matters upon which it professes to give them information.

A PRACTICAL TREATISE on the construction, heating, and ventilation of Hot-Houses; including Conservatories, Green-Houses, and Graperies, and other kinds of Horticultural structures. With practical directions for their management, in regard to light, heat, and air. Illustrated with numerous engravings. By ROBERT B. LEUCHARS, Architect Gardener. Boston: John P. Jewett & Co., 17 and 19, Cornhill, 1851.

THIS is a valuable work written for the practical application of those who would learn from the excellent teachings of a practical man.

The book may be consulted with great advantage by those who are building green-houses and such structures, and to those who already possess a green-house, whether it be large or small, the work is recommended for its sensible and judicious directions.

Some quotations were selected, which contain excellent practical directions, marked by sound sense and good philosophy, but they are excluded for want of room; they shall appear in future numbers.

Numerous cuts are interspersed through the volume, illustrative of the author's plans and suggestions—these are valuable to those who read for practical application, and would have been rendered much more available had they been accompanied by working drawings more in detail.

Cincinnatians will feel proud to see honorable mention made of their townsman, Mr. William Resor, to whose genius and enterprise a well deserved compliment is paid, where the author alludes to Iron Houses.

These books may all be had of W. H. Moore & Co., No. 118 Main Street, who keep a valuable assortment of works for the horticultural and agricultural, as well as the general reader.

METEOROLOGICAL TABLE.

CINCINNATI, APRIL 1851.

THERMOMETER			WEATHER.			RAIN.	SNOW.	WIND.
Date.	Min.	Max.	Sunrise.	Noon.	Sunset.			
1	56	70	rain, var	cloudy	rain, cl'y	.50		Light N E; calm at night.
2	64	67	cloudy	clear	clear			Do S W, brisk W
3	47	63	clear	do	do			Do S W and W.
4	44	72	do	variable	cloudy			Do S W and S.
5	54	66	rain	do	do	.55		Brisk S E, high S and W. Lilacs bloom.
6	39	58	clear	clear	clear			Light W, calm at eve.
7	40	65	fog, var	variable	cl'y, rain	.30		Calm, light S E.
8	54	57	cloudy	clear	clear			Brisk W, high W, calm at night.
9	39	66	clear	do	do			Light S W.
10	44	73	do	do	do			Calm, light S W and W.
11	49	57	do	do	variable			Light N, brisk N, calm at night.
12	37	58	do	variable	cloudy			Do N E.
13	45	55	rain	cloudy	do	.30		Calm, light W, calm and clear at night.
14	45	46	cloudy	do	do			Light N, do do do.
15	38	59	clear	clear	clear			Do N and N W.
16	37	51	do	do	cloudy			Do N W and N.
17	48	65	cloudy	do	clear			Do N and variable, calm.
18	47	68	clear	do	cloudy			Calm, light S.
19	50	57	variable	variable	do			Light W, brisk N W.
20	44	55	cloudy	do	do			Do N W.
21	37	56	do	do	clear			Do N W, and W, calm at eve.
22	38	67	clear	clear	do			Do N do do
23	42	69	do	do	cloudy			Calm, light S E and S W.
24	50	71	do	do	clear			Do do S, variable and calm.
25	48	75	do	do	do			Do calm, calm.
26	52	76	do	do	do			Do light S W, brisk W.
27	52	65	do	do	do			Do do W, brisk N W, high N W.
28	43	61	cloudy	do	do			Light W, calm, light E.
29	42	66	do	variable	do	.15		Do E and S E.
30	44	63	rain, var	clear	do			Do Westerly, calm at night

Total rain, inches

1.80

EXPLANATORY.—Calm means when a flag hangs to a staff; Winds classified according to force, into light breezes, brisk breezes, high wind, storm.

Mean temperature of the month.....	54.34
Do do April 1850.....	51.57
Do do do 1849.....	54.10
Do do do 1848.....	56.32
Do do do 1847.....	57.73
Do do do 1846.....	60.65
Do do do 1845.....	61.71
Mean temp. for April for the above 7 years.....	56.63

It appears that the present April is colder, by over 2 degrees than the mean temperature of this month for the past seven years.

Clear days in the month.....	10
Variable (cloudy at times).....	18
Cloudy (sun not visible).....	2

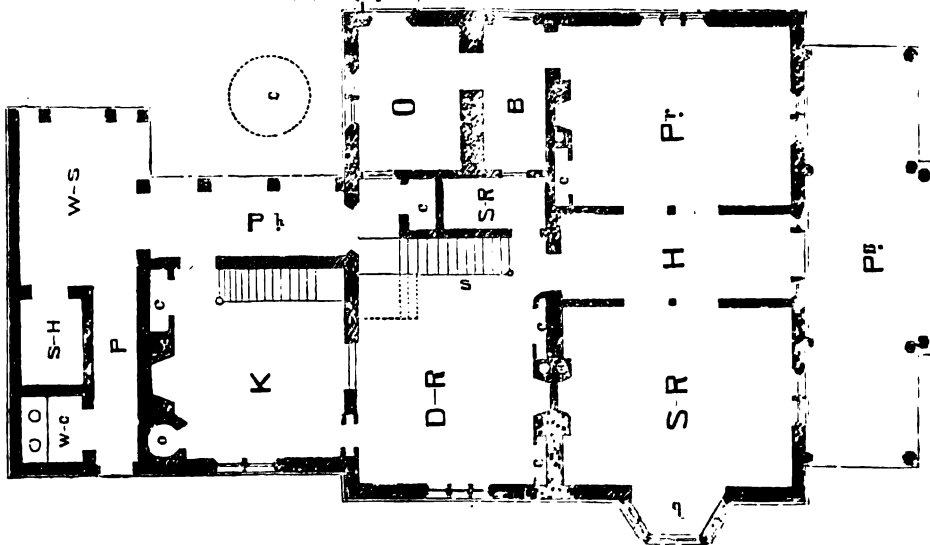
REMARKS.—The small proportion of high winds, and total absence of storms here in this month, are the more remarkable, as they have prevailed to so great a degree East of the Alleghanies. It is to be understood, as a general rule, that storms do not prevail here; this peculiarity of our climate, and the entire absence of any particular turbulence of the atmosphere at the period of the Equinoxes, has not been recorded by any of the early writers, so far as I know. I had observed it for some years previously to publishing it in the Gazette of October 13th 1848. M. Volney, the French philosopher and traveler, passed through this country in 1796, but does not appear to have discovered any of the peculiarities of its meteorology. It is true he thought the temperature about 3 degrees higher West than east of the Alleghanies, in the same latitude. Mr. Jefferson, likewise, thought there was a few degrees difference, but draws his conclusions from the natural growth of certain kinds of timber and plants. Mr. Flint does not allude to those peculiarities.

JOHN LEA.

THE
OF
THE



LINNWOOD COTTAGE.



GROUND PLAN.



VOL. I.

JUNE, 1851.

No. 9.

LETTER FROM DR. KENNICOTT.

THE GROVE, NORTHFIELD, Cook County, Ill., May 8, 1851.

DEAR DOCTOR:—We read *THE REVIEW* with much satisfaction, and await the advent of every succeeding number with some little impatience, as I often find comments on articles “in the last number,” in my private correspondence, before I get my current copy—giving abundant time for the enjoyment of anticipation—which, contrary to the old adage, is, in this case, surpassed by the reality.

With a Downing as editor, and Luther Tucker as publisher, *THE HORTICULTURIST* could not fail; and, as was freely predicted, it has met with the largest and most deserved success, and has clearly marked an era in American Horticulture.

Nurserymen and fruit growers—persons of polite letters, and refined tastes—and, indeed, all of those with the capacity for appreciating and enjoying the beautiful in nature and art, soon found, or made this Journal a positive necessity, or a most desirable and useful luxury.

When we commenced the nursery business, I frequently consulted the elder brethren of the art: and one of the least enthusiastic, and most utilitarian of the Eastern Nurserymen, wrote me: “Send for the *Horticulturist*, you can not afford to do without it.” The same

man still holds to this opinion, with this addition—“Doctor Warder’s paper is still more necessary to you of the West—you *can not* do without it.” He is right, we can not.

The *Horticulturist*—though eminently scientific and national in its character—necessarily draws most of its matter from the experience of the seaboard, and the older states; and we are just beginning to learn what some of us have long suspected, that peculiarities of *SOIL* and *CLIMATE* have much to do with the success or failure of our best efforts—and that fruits of surpassing excellence in one part of the country, may disappoint expectation in another.

In speaking of climate, I do not refer so much to relative temperature, as to the many sectional phases, and meteorological phenomena, which go to the formation of the climate of the Mississippi Valley, and the region of the great Western Lakes.

The general principles of scientific culture are the same every where—and we read and profit by the precepts and example of Downing and his compeers, as much as they do by that of the old world. But can the eastern cultivator adopt the routine practice of Europe, or does he find all the “new pears”

great merit there, even tolerable on this side of the Atlantic?

I have seen northern fruits in Mississippi, and have tried them in Louisiana—and have had my fifteen years experience here, in northern Illinois; and, I much fear, have not been entirely blameless, as a nurseryman, in disseminating eastern fruits, and eastern notions of culture in the West. I have had my full share of disappointments, and disasters, too—and yet, I am not discouraged. I have purchased my experience in Horticulture, as you and I have in other sciences, and I have sold some experience to my customers: but in “homœopathic doses.”

As a medical man, I ought to have known better; for, like most Western physicians who reason, as well as observe and believe, and are not obstinately wedded to the doctrines of an eastern “Alma Mater,” I early observed the effects of climate, and other western peculiarities on diseased vitality. And you, and I, can not doubt, that the “principle of life,” and functional integrity, or *identity*, and *permanency of character* in the lower order of living beings, are more susceptible to uncommon impressions, than in *man*. Or, in other words, man, and the higher order of animals, are much more readily “*acclimated*” than plants.

Within the last fifteen years, I have made several trials to introduce plants perfectly hardy in England, and on our own seaboard, north of this parallel of latitude, and have failed. Who does not know that the English hedge plant—the Hawthorn—fails miserably in this region? The climate is doubtless, too hot and dry, in mid-summer. The winters do not affect this plant, so far as I have observed, though it may do so in some places.

And for the very reasons that the Hawthorn fails, I am inclined to believe that the OSAGE ORANGE will succeed far north of its natural locality; for it will find a climate—

differing only in the *intensity* of winter frosts and I am beginning to think that we have much overrated this latter circumstance.

It is not so much the greatest range, or extreme markings of the thermometers, as the number, extent, and rapidity of the alternations, and the *condition of the plant* exposed to injury from changes, in which we have to look for the causes of “winter-killing.”

Recent experiments have convinced me that “hardy plants,” which naturally love a light dry soil, are very liable to winter-kill when planted in a wet, spongy, or mucky one, like our prairies. Early and perfect maturity of the current year's growth, and uninterrupted rest during the winter, will enable the peach to stand 25° below zero, without injury to the nascent fruit bud; as I have been assured by men of much observation, and as I think I have seen, on borders of the great “New York Desert.” And I have not a doubt, that half of your readers in the west and south, must have known the peach buds during an “open winter,” or after a late growing autumn, killed by a temperature little if any below zero.

But these are very familiar examples of the necessity of carefully investigating differences in soil and climate, and modifying our culture to suit our locality; more serious studies for the Pomologist are opened when we come to the inquiry of the influence of these upon the perfection of foreign fruits.

Cincinnati, and the region thereabouts, have settled the question as to many known varieties of the grape: but the most of us are more interested in other fruits; and experience has already shown us that the eastern standard of perfection does not hold good throughout the west—though many fruits of great excellence east, have been found equally good in some western localities.

All this we expect you to settle for us, as

western experience shall develop new facts, and local practice supersede or modify eastern diets—to which our Pomologists have heretofore yielded filial obedience.

A man of some note very recently expressed the opinion that "The Western Horticultural Review is bound to revolutionize Western Pomology." I think it is bound to do more than this; and, like its worthy prototype, work a few miracles in the new, as that has done in the old states.

You have a glorious field before you, Doctor, and you have only to "go ahead" in the true western style, and in the harmonizing spirit of horticultural propagandism; carry your taste into a few of our barn-like farm-houses, and show the effects of trees and plants in the composition of a HOME, and of good fruits on the health and comfort of its inmates; not forgetting the *respectability* and money profits in your accounts, and you will reap your reward in the end.

Would that I were capable of aiding you as I wish, in the great work; but, though a tolerable thinker, and much given to observation, I am no writer. Not that I have not written *much*, but that I can not write *well*: and yet I love to write on all subjects connected with the cultivation of the earth; and

as the spring melts into summer, my season of hybernation will close, and if you will promise to be as candid as GIL BLAS, you shall, perhaps, have as many quids of my rambling incoherent rhapsodies as you will read.

I love flowers and fruits—the graceful tree, and half sentient plant, nearly as well as I love my children; and I am very apt to love all who think as I do on these subjects, and what I think and feel, *I write*.

"GOD IS LOVE," and he has made this principle the one upon which turn the pains and pleasures of existence. All of us, who are human, are imbued with some love of the beautiful, and some capacity for enjoyment. There is religion in the love of the voiceless productions of nature—there are words of promise written on every opening bud, and the older we grow, and the more we learn of the capabilities of this beautiful earth, and the natural enjoyments which the creator has placed within the reach of every man, who owns or rents a rood of ground—the more grateful are we for life, and all its present blessings and future hopes. But my sermon is ended. Ever your friend,

JOHN A. KENNICOTT.

Dr. JNO. A. WARDE.

VEGETABLE PHYSIOLOGY, No. 3.

IN continuing the subject of our last article, it may, perhaps, be as well to notice first, the points of agreement between animal and vegetable life.

They are both organic, that is, they perform certain functions through the medium of certain organs, or apparatus. Much has been said and written on the evident adaptation of particular organs to the performance of the functions allotted to them, and a great deal of it with evident truth,—but let me ask the

paradoxical question, whether one who has never seen them in play, could for a moment judge that the lifeless thing before him, with all its complicated machinery of nerves, brain and blood-vessels, or of cellular and vascular tissue, spinal vessels, root, bark, and stem, with its feeble chemical combinations of ternary and quaternary compound, could, for a single hour, resist "decay's effacing finger"—or fail to fall an immediate prey to the all-pervading laws of affinity? Certainly no one.

Mechanism fails us in endeavoring to solve the enigma,—and chemistry not only fails, but opposes. I am aware that the ingenious theory of endosmosis and exosmosis, (of which more hereafter), together with the action of light on certain combinations, may satisfactorily account for *some* vegetable phenomena, but not for all.

Why is it, that whilst the rootlets act by endosmose and exosmose to assist in the sustenance of the vegetable being, they are themselves exempt from the laws of chemical decomposition? We may illustrate this principle by tying animal membrane over the end of a glass tube containing a solution of sugar, and inserting it into a vessel of water; reverse currents will be established through the tissue, as they would in any other case where the gravity of the liquids within and without it differed, but the membrane does not escape destruction; it is soon resolved into its original elements, and mingles with its frater-nated bodies in air, earth, and water.

Animals and vegetables agree, therefore, in both being organic, but they are more than merely organic,—and in this mysterious addendum (vitality) is a second and important point of agreement. Third—they both require frequent nourishment to sustain this vitality, and to this as an inevitable consequence follows another, that, if this be withheld death ensues,—or, in other words, a return to the dominion of chemical laws takes place; deny their appropriate food to the animal and plant, and they equally droop and *die*. But food alone is not sufficient for either, it must be *appropriate*. True, the carnivora may drag out for a time a living death on vegetables,—the plant may prolong a feeble and sickly existence in an inappropriate soil, but a healthy development of either, can only be expected under circumstances favorable to the action of organic and vital laws, particular as well as general. Let

me ask, not as at all important to this immediate connection, but simply as a hint for future reflection—how long could a vegetable feeder exist on animal food? The tiger, the cat, or the lion, might live for a limited period exclusively on vegetables, but how long could the cow or the horse exist on flesh?

We have now before us a slight view of the beautiful harmony and order that reign through all nature; first, imagine matter derived from the disintegration of solid rock; next, vegetation organising a portion of it, and adding elements drawn from air and water, then the graminivorous animal browsing on the grass of the field; next, the carnivora preying on the vegetable feeders: and, lastly, man, the lord, the tyrant, the consumer of all. We have the nonsensient organizer, the organic and sentient, supported by the products of a single organization, another division of the same, requiring that its food shall have passed the ordeal of a duplex organization. And the organic, sentient, and rational (man) a consumer of both.

Animal and vegetable beings are, therefore, both organic, both vital, require nutriment for existence, and in its absence they die. On the other hand, inorganic or mineral nature asks no food, and can not be said to know death.

Another point of similitude is, that both animals and plants have a somewhat fixed and definite period of duration, and were the laws which govern organic life more strictly complied with, there can be no doubt that the decedence period of both would become very much more constant, and perhaps in some cases greatly extended; but even as it is, the zoologist and botanist lay down with a good deal of accuracy, the ages to which the various subjects of their respective studies are likely to exist. The oak may brave the storms of centuries, but the lily entombs its beauty in its native dust, within a single sea-

son. The age of the ash, or the elm, may be counted by scores of years, but the fragrant wall-flower, or showy stock, have appointed to them, but the comparatively short duration of two summers; nor can the skill of the gardener by any management, extend this brief period much beyond the natural limits.

The tender annual, nursed into being by the genial warmth of spring, displays its evanescent beauty for a few years, provides itself a successor in embryo, wraps it in a coat impenetrable to the frosts of winter, and commits it to its parent earth. This short round of duty, if we may so term it, performed, it bends beneath the autumn blasts, yields itself up to become nutriment for its offspring; thus beginning and ending its existence in a single summer. The biennial requires an additional season to develop its beauties, but just as inevitably hides itself in the dust the second year of its existence, as the annual does the first. The perennials have a longer period allotted to them, but even they are each and all limited and bounded in their duration,—so in the animal creation. “Three score and ten,” “are the days of the years allotted to man;” perchance, “by reason of strength,” he may pass over them; but what are the balance?—“labor and pain”—second childhood. The horse, the dog, the sparrow, and the long-lived eagle, all have their periods of existence meted out.

Let me here again ask, who, by a mere examination of the organization of either animal or plant, oak or eagle, tulip or sparrow, could ever judge that, whilst the branches of the oak we plant may shade our children’s children for many successive generations, the tulip can delight us but a fraction of a single year? There is a mystery in all around us, which we can not fathom. “*There is a God,*” and he who fails to see his existence written

on all nature, must be either hopelessly a fool, or incurably a madman.

There is also a tendency in both animals and vegetables to the performance of certain functions at periodic times, which, for want of a more appropriate name, we will call periodicity. In animals, whether in health or disease, this tendency can not have escaped the notice of the most casual observer; that it has not been so much noticed in vegetable life, is due to the fact that in this department it is not so much a matter of immediate importance to us. The *Portulacca*, and all other annuals, produce their flowers *once and at so constant a period*, as to justify the florist in naming in his catalogue the month, if not the day, in which they may be expected respectively to develop them. In any work on botany, we may find the season stated when the various plants expand their petals, and so confidently do we rely upon it, that should we see the *Helenium autumnale*, or the *Aster solidaginoides* flower in May, or the *Erigenia* (nurtured into life by the first genial breath of spring) delay its blossoms to August, we should be equally astonished.

The *Agave americana* (great American aloe, or century plant) which, according to the common belief, flowers but once in a hundred years, requires, even in its native woods, a quarter of a century to put forth its pyramid of gorgeous blossoms—after which, as though the effort had exhausted all vitality, it sinks into decay—whilst the *Cerastium* displays its florets in as many days as the *Agave* requires years. Nor does the period of inflorescence depend exclusively on temperature, which, doubtless, does exert a very great influence,—but, when the proper period arrives, whatever the temperature, provided it be not so low as to present *mechanical* obstruction, close inspection will always reveal an effort in vegetation to the performance of its functions. How far this may be influ-

enced by electric action, we may in some future number attempt to investigate, but the almost metaphysical character of the imponderable agents, their vast diffusion through illimitable space, and the well known effects

they are capable of producing on organized beings, renders the idea not at all chimerical, that electricity does exert an important influence upon the performance of the vital functions.

T. S.

CONVERSION OF PEAT INTO MANURE.

THE attention of the public has been directed to the use of manures of this class. Nor can too much be said upon their importance. The application of scientific principles to the every day operations of the farm and the garden, is destined to effect a great change in the results to be obtained.

In these pages the reader will find a collection of articles upon the subject of carbon manures, which may be read with profit.

It is not a little singular that the same substances which act so important a part as disinfecting agents, by means of their absorbing properties, should also be thus the most valuable agents for conveying to growing plants the substances necessary to supply their wants. This is the secret of the remarkable value of carbon as a manure. Its associates, of various compounds, are the substances assimilated by the plants, while it remains nearly or quite indestructible.

As along the whole range of the *Atlantic States* as well as upon the margin of those rivers, bays, creeks, and estuaries which abound therein, and find ultimate outlets in the ocean, there are to be found vast deposits of peat, and kindred vegetable bodies, the utilization of these substances as manure becomes an object of the very first importance, and the more so, as, from a long continued course of improved culture, most of the arable land in those States has become greatly exhausted, and the ordinary sources of manure have failed, thus far, to arrest the course of deterioration to which they have been subjected.

Peat, as we know, is composed of vegetable matter, the accumulation of centuries,

in certain locations, there deposited under circumstances which but slightly favor decomposition, and may be said to consist of decomposed, partially decomposed, and undecomposed vegetable matters, which may be very readily presumed to be somewhat variant in their constituent elements, and which, according as they may have been more or less excluded from the influence of atmospheric air, by superincumbent water, to have undergone a greater or less degree of decay. But as peat once possessed life, its power of re-producing life in living bodies can, by the application of proper agents, be restored, and restored so effectually too, as to make every pound of it equally good for the fertilization of the soil, as an equal weight of barn-yard or stable manure would be. The means by which this desirable end can be brought about is the object of the writer of this essay, whose purpose shall be to state them in so plain and practical a way, as to place the *modus operandi* within the comprehension of all.

Peat, operated upon by local circumstances, may vary, to some extent, in composition, but the difference is too trifling to effect its value as manure, as will be made manifest by the following facts.

The mean of 20 analyses of the peats of Rhode Island, by Dr. Jackson, gave the following results:

Water from	10 to 25 per cent.
Ashes, when burned,	24.07
Vegetable matter,	72.39
Silica,	4.31
Iron and Alumina,	1.84
Lime,	1.82
Magnesia,	.32

The average of 10 analyses of Massachusetts peat, agreeably to Dana, was as follows:

Soluble Geine,	29.41
Insoluble Geine,	55.03
Salts and Silicates,	15.55

This average comprises various kinds of peat, such as are mostly used as fuel, turf and swamp muck, so that it takes within its range the ordinary kinds of substances available to farmers, in different situations, and, therefore, presents a fairer view of the real value of such substances than it would be, had the analyses been confined to fuel peat proper, as the two latter bodies are more frequently to be met with in most localities than the former.

A more recent analysis made by peat found on the estate of the Hon. James A. Hamilton, of Nevis, near Dobbs' Ferry, in your State, gave the following results.

One hundred parts of the dried muck contained as follows:

Soluble and insoluble Geine,	81.03 parts.
Silica,	12.46
Alumina,	4.80
Oxide of Iron,	1.11
Lime and Magnesia,	.60
	100.00

The average of the preceding 31 analyses give us above 79 per cent. of vegetable matters in various stages of oxidation, the greater part of which is in an insoluble condition.

American Artizan.

The Uses of Peat Moss, and the value of Peat Charcoal, as a Disinfectant and Fertilizer.

It may be necessary to mention that by the aid of peat charcoal, Mr. Rogers purposes to consolidate and deodorise the solid matter of the London Sewers; and whilst by that means benefiting the inhabitants of the metropolis, there would be placed within the reach of the agriculturist a manure of the most powerful description—pulverized, free from odor, and fit for transit by any conveyance. In 1845 he brought the subject under the consideration of the public, and it was then alleged that charcoal could not give the necessary quantity of carbon to the root of the plant, the leaf and not the root being the portion which absorbed such sustenance. Often, however, since then, he had tried the experiment, and the result had invariably been, that the root as well as the leaf of the plant attracted the carbon, and, therefore, he was more convinced of the propriety of the system he had promulgated. From the experiments he had made he had found that peat

charcoal possessed far superior advantages to wood charcoal; it had a deodorising effect, which wood charcoal had not; and if they considered how such an agent could be made to operate upon the sewage matter of London, no one could be left in doubt as to the public benefit. Wherever it had been used it produced most extraordinary effect. If excretia, in its natural state, was intermixed with charcoal, it at once absorbed and took up all those gases which, if exposed to the atmosphere, were lost; it kept that nutriment until such time as the dryness of the earth surrounding a plant intimated its lack of sustenance, and gave forth its revivifying influence when it was wanted. In short, by the admixture of charcoal with excretia, all the gases were at once taken up and retained, ridding the public of nuisance and disease, and giving to the land the entire benefit. Peat charcoal was, perhaps, the greatest absorbant known. It would take up and retain about eighty to ninety per cent. of water, and at least from ninety to one hundred volumes of those noxious gases arising from animal excrement, and other putrescent matter. Hence its great value for effecting deodorisation, and for retaining all the value of the liquid as well as its volatile products. Equal parts of prepared peat charcoal and excretia would, under almost every circumstance, if properly intermixed, produce a manure of almost incalculable value. The proportion, however, of charcoal might be more or less in some instances, even down to one third.

In its natural state, peat moss had several peculiarities. It contains in different proportions, ammonia, pyroligneous acid, tar, etc., and also a very singular production, a "fatty matter," which, when purified, closely resembles spermaceti, and makes a very beautiful candle. Mr. Reece has recently patented a process for the extraction of these articles; and I am happy to say a few energetic Englishmen have not feared to risk both themselves and their fortunes to commence operations on an extensive tract of bog and mineral in the county of Antrim, where they have coal as well as peat, and they purpose carrying out the production of iron from ore which is upon the property. "Price's Patent Candle" may possibly yet be rivalled by "Reece's Bog Spermaceti." To speak seriously, the production is really beautiful, and

gives a pure and strong light. The question to be solved, however, is, can it be obtained in sufficient quantities to be profitable? It is found in its natural state at times, in small quantities, collected together by some peculiar local filtrations, or, perhaps, affinity, which draws it from the mass around to one spot.

I have seen a collection of it—a little well, I may say—of six to seven inches in diameter, containing the matter pure, and about the color of butter. The superstitious tradition of the peasantry is that the fairies hide it for their use, and hence it is called "fairy butter."

MY FLOWERS.

LADIES are often disheartened in the management of their gardens by attempting too much. When unable to purchase new and expensive plants, or rear the tenderer ones, they are disposed to give up every thing, and neglect an interesting occupation, because they fancy nothing can be done without money and a good gardener. Now this is a great mistake. A lady may effect much without any assistance if she will but believe that "common" flowers and plants, as they are called, are well worth looking at when tastefully arranged and carefully attended to. A "good gardener" certainly insures you a greater variety of flowers, and they are, of course, finer than those nursed by an inexperienced hand; but you have not the same pleasure in your little kingdom when there is some one who knows and does everything there better than yourself. A lady with a good gardener begins cheerily at first, but in a year or two it is all over. She walks round the glowing borders, but her interest is gone. To enjoy your garden thoroughly you must say, with Queen Elizabeth, "I will have but one mistress here, and no master." Most ladies, however small their means, may occasionally employ a laborer to do some of the rougher work, such as digging or rooting up a tree; and if they can but be satisfied with a less choice variety than their richer friends, I am sure the effect produced may be quite as good. I have often turned away from beds full of flowers, with names unheard of before, and have said: "After all, give me the cottage flowers—the rose, the honeysuckle, the sweet-pea, and mignonette—they are sweeter and prettier than anything I see here;" and others have said so too. These truly home-breathing flowers, connected too with our earliest years and sweetest recollections, should never be undervalued, their fragrance is unequalled, and their beauty can never be surpassed.

I do not think the ivy is sufficiently considered as an ornament to the garden. Its rapid growth makes it invaluable where large buildings, or walls unfit for fruit trees, require to be covered; but it is equally useful as an embellishment among shrubs, particularly those which shed their leaves in winter. The dead stem of a tree, with its boughs left on a foot or two in length, clothed with ivy, is a beautiful object, standing in quiet stateliness among the lighter beauties of the shrubbery, with its dark rich mass of foliage growing richer and handsomer, as its neighbors sicken and die. When I first saw an ivy-tree I was struck with its beauty and solemnity of look: it gave an appearance of age to the garden, which is also an advantage. Any stump or rough pieces of wood nailed strongly together will do to support this beautiful climber, which wraps itself thickly round its prop, and then hangs in waving masses, covered with its starry flowers, on every side. A lady may easily encourage the Irish Ivy, which is the richest and quickest growing kind. Cuttings planted fall or spring will take, and shoot up rapidly; and I have known them, when ignorantly planted with their head downwards, spring up as merrily as if all was well. If you can find a rooted plant some feet in height, so much the better; tie or nail it closely to its support till it has fixed itself, and the desired effect is of course, sooner obtained. Never let ivy climb round a thriving tree, it clasps so tightly that the wood can not expand, and disease and death will ensue. It thrives equally well on living and dead wood, needs no attention except to fix it up when loosened by the wind or other violence, and is the most beautiful, graceful, and effectual screen that a garden can possess.

Rustic baskets, supported on wooden feet, look beautiful when covered with Irish ivy. During the winter they are ornamental in

themselves; and when filled with geraniums and other flowers, with the tendrils running over and concealing the pots, the effect is perfect. These frames may very easily be made, as they are not intended to hold soil. A few crossed sticks nailed to a piece of board, the shape and size you wish, is quite sufficient, the ivy will soon hide it all, and form a green and beautiful basket. Whenever you wish a shrub removed, see if you can not make it useful in this way; head down three or four of the stems to a proper height, and fix a basket upon them; cut away all the rest, and as the leaves spring from the standing stems, keep cutting them off, they will soon cease to trouble you. In the earlier stages of ivy-plants, a crimson or white rose blooming amongst its dark leaves has a lovely effect; but when it becomes thick and bushy, the rose-tree had better be placed elsewhere. Ivy forms a beautiful kind of carpet under trees, where grass does not grow; it runs and spreads, and seems, like a joyous spirit, to revel in its own light-heartedness.

By simple means, such as these, the eye and hand of taste may perform wonders, without expense, and with little time and trouble. The ivy flourishes everywhere,—evergreens do well in almost all situations,—violets and the star-like periwinkle decorate an awkward-looking bank; an unsightly hedge may be enlivened with scarlet-runners,

nasturtiums, and convolvulus, so that few gardens may not be made to smile, even under great disadvantages. Ivy will help you here; let it creep about, and cluster where it likes; it beautifies everything it clings to.

A neatly-mown lawn, with an ivy-basket or two, a trellised porch or veranda, waving with roses, honey-suckle, and jasmine, a wall clothed with creeping plants, or a vine, or any favorite ivy, with an invaluable Virginia creeper for "winter-wear," a few beds of well-chosen annuals and perennials, neatly kept and cared for, a few judiciously-placed flowering shrubs and evergreens, are quite enough to make the country parsonage and cottage residence gay and delightful, both to the eye and heart. Surely all ladies may accomplish this! How much of the enjoyment of a happy domestic country house springs from its garden! What a tale it may tell, in its silent sweetness, of all that is passing within! It "discourses eloquent music." There are the husband's apple and pear trees, twined by the wife's sweet clematis; his cabbage-beds fringed with her pinks and pansies; the tool-house wreathed with roses; his rougher labors adorned by her gayer fancy—all speaking loudly of the happy union of their hearts and tastes.

Let us foster as much as possible the love of gardening, for it involves that holy feeling, the love of *home*.—*Cottage Gardener*.

LETTER FROM THE WEST.

Wyandotte Agency, Feb. 13, 1851.

N. LONGWORTH:—Many thanks to you, my dear sir, for the *Western Horticultural Review*—it arrived most opportunely, for I was both sick and sad. I had contracted the ague before coming to this upper country, where there appears to be no local cause for this miserable disease, as the land is high and rolling, with no ponds or standing water. The pretty Jersey Creek, fed by living springs, winds away to the left of the agent's house; notwithstanding the intense heats of the past summer, and the dry, warm winter, it has continued to flow gently over its pebbly bed.

I was sad, and in the perusal of its pages I was comforted. * * * Three numbers have gone like winged messengers of shrubs, and flowers, and fruits, to my reading Wyandotte friends. After the spring payments, I hope to send something from them in return, more valuable than my barren commendations.

I never hear or think of the floral treasures collected by the French botanists in this vast territory, without wishing for the ability to do likewise, or to send some competent person. My desire is to stimulate inquiry upon the subject of our beautiful native flowers,

shrubs, and fruits, which, alas! like their associates and admirers, the poor Indians, are rapidly passing away, before the tide of civilization that is pouring over the country with irresistible force. * * *

There is no difficulty in the safe transmission of any articles from this country, so soon as the navigation opens; as boats, passing from St. Louis to St. Joseph, stop at Kansas and other intermediate points. * * *

Friday morning, February 14th.—A soft, warm, gentle rain is falling; the peach buds are swollen, and begin to show their red color—my sister thinks prematurely, for late frosts occur in this latitude, ($39^{\circ} 10'$.) There must be some peculiarity of soil and climate, which pushes on vegetation to an early maturity. The past spring was cold and late. I find a memorandum to the effect that, on the 4th of July last, the garden furnished cucumbers, beans, early corn, potatoes, and the second planting of peas in full bearing—the third planting of radishes becoming pithy; fine heads of lettuce bleached to that crisp, creamy whiteness, which makes it so agreeable an addition to the table. * * *

The point of land upon which the Agency is built, has a soil of light sandy loam, and washes a good deal on the northern slope next the creek. The air is generally dry. I do not recollect ever having seen so many bright sunshiny days during winter as this season has presented here. There is less fog here than on the Ohio; though the Missouri is three-fourths of a mile wide in front of us, I do not recollect any morning upon which I could not distinguish objects upon the other side, except when the Indians had burnt the prairie during their fall hunt, when every thing was enveloped with smoke. Major Moseley, who keeps a record of the variations of the weather, says that vegetation is quite as forward here as in Paris, Ky. The whole Wyandotte territory is covered with

a continuous forest of Walnut, Elm, Hickory, Blue Ash, Honey Locust, Linden, Mossy Cup, white and red Oaks, Paw-paw, Pecan, Red-bud, Pigeon-berry, and the Buckeye, (a beautiful shrub here.) There is no Sugar Maple, but the Indians are now making an inferior article from the Box Elder, which does not crystalize well; it grows abundantly on the bottoms, along the Missouri and Kaw rivers. * * *

Mr. Walker thinks his strawberry plants from the prairies are much improved by cultivation. I shall, however, thankfully receive any thing you may send, and will gladly procure you what grows here. Eve like, I love to be at work in the garden. * * *

Can't you send some flower seeds to my pretty Wyandotte girl, Ma-an-za, she has such a passionate love for flowers—cultivates them with her own hands, which are so small, that I am surprised at the facility with which she uses the hoe. She, too, would willingly gather wild flowers to send; she would do it con amore, for she knows every bubbling spring, flowery bank, and picturesque object in the country. * * *

From Mr. Armstrong, I learn that the Osage potato was found here when the Wyandottes first came, but it has been almost exterminated by the hogs; also, that a variety of the Cactus was found—I have seen it in his garden. * * *

Respectfully, M. S. C.

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This letter will be read with interest by many friends of the writer, who have known her when a resident of Ohio and Kentucky. She is the very person to visit a new country, having an interest in the natural objects around her, and, therefore, observing the peculiarities and productions of the region, some of which are here recorded; then, her sympathies for the poor Indian exiles from this state qualify her to serve them in many ways—Ed.

CAMELINA SATIVA, A NEW OIL PLANT.

THIS is a curious plant, usually enumerated among our indigenous plants, though as it does not long propagate itself with us spontaneously, and is found only in cultivated fields, chiefly among flax, with whose seeds it is often introduced from abroad, there is good ground for presuming that it is not in reality a native.

In some parts of the world it is cultivated for its stems, which yield a fiber applicable for spinning, and for its oleiferous seeds. Merat and De Lens say that it is cultivated for these purposes in Flanders.

The seeds are sometimes called sesamum seeds (*semina sesami vulgaris*;) but they must not be confounded with the genuine sesamum or teel seeds, the produce of *sesamum orientale*.

Mr. William Taylor, F. L. S., has recently drawn the attention of agriculturists and others to the *Camelina sativa* as an oil plant, adapted for feeding cattle, and for other purposes. He says that the soils best adapted for its cultivation, are those of a light nature; but a crop will never fail on land of the most inferior description. It has been found to flourish this year on barren sandy soils, where no other vegetable would grow; and, independent of the droubht, the plants have grown most luxuriantly, yielding a large and certain crop. When grown upon land that has been long in tillage, and well-farmed, the crop will be most abundant. The best time for putting in the seed is as early as possible in the spring months—say from the middle of March, or the middle of April to June, and for autumn sowing in August; and the quantity per acre required, 14 lbs., and may be either drilled or broad-cast; but the drilled method should be preferred. If drilled, the rows must be twelve inches apart.

As soon as the plants have grown five or six inches high, a hand or horse-hoe may be used to cut up the weeds between the rows, and no further culture nor expense will be required.

If sown early, two crops may frequently be obtained in one year, as it is fit for harvesting in three months after the plant makes its first appearance; or another important advantage may be obtained: if the seed is sown early in March, the crop will be ready to harvest beginning of July, and the land

fallowed for wheat or spring corn; also, when barley or small seeds can not be sown sufficiently early, this may be put in with great success. It is a plant that may be cultivated after any corn crop, without doing the least injury to the land, and may be sown with all sorts of clover; the leaves of the gold of pleasure being particularly small, afford an uninterrupted growth to any plant beneath it, and the crop being removed early, the clover has time to establish itself.

The grower of this invaluable production is, in all seasons, secure of his crop; inasmuch as it is not subject to damage by spring frosts, heavy rains, and drought, and, above all, the ravages of insects, more particularly the cabbage-plant louse (*aphis brassica*), which so frequently destroys rape, turnips, and others belonging to the cruciferæ order, when coming into blossom. The seed is ripe as soon as the pods change from a green to a gold color. Care must then be taken to cut it before it becomes too ripe, or much seed may be lost. When cut with sickle, it is bound up in sheaves, and shocked in the same manner as wheat; the process of ripening completed, it is stacked, or put in a barn, and thrashed out like other corn. The expense of these crops can not be very great, either in the preparation and culture of the land, or in the management in securing the produce afterwards; but, when grown with care, and in a good season, the produce will mostly be very abundant, as high as thirty-two bushels and upwards the acre.

The cultivation of this plant for the seed would repay the farmer. An abundance of chaff would be produced, which would be of infinite service for horses or for manure; but, in a grazing country like England, where vast sums are annually expended for foreign oil-cake, the gold of pleasure will soon be found an excellent substitute under manufacture, and consequently a grower would find a good remuneration on cultivating the seed.

The plant may be considered a valuable production of the earth; a fine oil is produced for burning in lamps, in the manufacture of woollen goods, in the manufacture of soaps, for lubricating machinery, and for painters. The oil-cake has been found highly nutritious in the fattening of oxen, and sheep, as it contains a great portion of mucilage and ni-

trogenous matter, which, combined together, are found very beneficial in developing fat and lean.

From the experiments above related, it is abundantly proved that it does not suffer from the severest frosts, its foliage not being injured; it is not infested by insects, nor does it exhaust the soil. The gold of pleasure has been cultivated by several practical agriculturists, who highly approve of the new plant. For all these reasons, it is to be hoped that every farmer will avail himself of this valuable discovery as a remunerating rotation crop.

Mr. Taylor adds, that one acre, cultivated with these plants, yields thirty-two bushels of seed, from which 540 lbs. of oil are obtained. So that the *Camelina* seems to exceed the flax in its produce of seed, oil, and cake per acre.

The seed is extremely rich in nutriment. I know of no seed superior to it for feeding cattle. The oil obtained by expression is sweet and excellent, especially for purposes of illumination. From the very small quantity of inorganic matter in the seed, it will be evident that the seed cake must be of a very nutritious character, being merely the seed deprived of a portion of its water and oily matter.

We have examined some of the oil obtained from the seeds of the *Camelina sativa*, and which has been recently sent to several medical men by Mr. Taylor, under the belief that it possesses valuable medicinal properties. It is of a yellow color, and smells something like linseed oil. Finding it beneficial in relieving the incessant cough and reaching of a cat, Mr. Taylor has extended its use to the human subject, and states that it has done "a world of good," and cured several persons afflicted with diseased lungs and asthma.—*Phar. Journal*.

Protection of Grape Vines from Rose Bugs.

EDITORS CULTIVATOR:—After many trials, I think I have discovered a *very easy, cheap, and effectual method* of protecting *grapes* from the ravages of the Rose Bug. The history of the discovery is as follows: Being situated in East Haddam, Connecticut, where we have steamboat navigation, and facilities for transportation to almost every part of the country, I concluded to commence the cultivation of

Isabella grape vines, for market. When I first began my grape nursery, I was surprised to find that the *rose bugs*, which were so destructive elsewhere, did not meddle with my vines in the nursery; but at first I supposed that it was because the vines were in a new place, where the bugs did not happen to find them. The like happened from year to year, till I began to think that it was because these vines lay on the ground, that the rose bugs did not meddle with them. To determine this point, I laid some branches of my larger vines on the ground, and had the satisfaction of finding that the *buds, blossoms, and fruit*, which were formed within a few inches of the ground, were *never* molested by the rose bug. I then concluded, that I had made a desirable discovery, and I requested a number of my friends to try it, and their success has corresponded very exactly with my own. So that for the last two or three years, when the rose bugs have been very abundant, my friends and myself, have been uniformly successful in preserving from their ravages all the grapes which grew on those vines, which we laid on the ground, before they leafed out. The rose bugs *never* disturb the grapes after they begin to have a sour taste. This taste they generally acquire as soon as they attain the size of large shot. At this period of their growth the grape vines should be set up on a trellis, the side of a building, or a fence, or tied to stakes, or put into other situations which will allow them plenty of both air and sunshine; for the grapes which *continue* to be on the ground, do not grow and ripen as well as those which are set up. The vines should be laid down before they leaf out in the spring.

By this method of proceeding, I should think that I last year obtained more fruit, from one of my grape vines, than the whole amount which I had obtained from that vine, by every other method which I had tried with it, in twenty years before. By this method of proceeding, my Isabella grape vines, have several times, been so much overloaded with fruit, that it became necessary to lighten their load considerably, in order to prevent the whole from blasting. And here let me say to the lovers of good grapes, that when the fruit on a vine, which is heavily laden with fruit, begins to turn brown, and appears to be sun-burnt, both the good of the vine, and

the value of the crop, require that the vine should be unloaded of a part of its burden.

In setting up the vines which have been laid on the ground, it is highly important, that they should be put up in such a manner that the same sides of leaves, which grew next the sun, while the vine lay on the ground, should be placed next the sun when the vine is set up again, otherwise the health and vigor of the vine will be so much injured, that the growth of the fruit will be checked.

If the vine is to be set again in a *perpendicular* posture, the *spreading* branches of some tree, may be cut off, before they leaf out, and the vine may be laid on these leafless branches and tied to them, or a moveable trellis may be laid on the ground, either west, north, or east, but not south, from the roots of the vine. The vine may be laid on this trellis, and tied to it, and at the proper time, the vine with the trellis, or the branches of the tree, may be set up, with much less injury to the branches and leaves of the vine, than if the vine was brought up alone. And if the vine is laid down west, or north, or east from its roots, there will be much less difficulty, in placing the leaves, in a proper position, than if the vine was laid down south of its roots. The sooner it is set up after the grapes are large enough to be safe against the rose bugs, the less will the vine be injured by moving.

But where there is room, and where it is advisable to place the vine in a *horizontal*, instead of a perpendicular position, poles or rails of a sufficient length, to give suitable expansion to its branches, may be laid on the ground, and across the trunk of the main branch of the vine, at the distance of perhaps three feet from each other, and beginning perhaps four feet from the main root, then the vine may be laid down on the poles or rails, with the branches extended, in a such manner as to give plenty of room for the air and sunshine. And when the proper time arrives to set up the vines, the ends of the posts, or rails, may be laid up on crotches, or posts, three or four feet high, and the thing is done at once.

I shall not attempt at this time, to tell the reason why the rose bugs will not eat the grapes which lie on the ground, but a number of years' experience, has uniformly shown that they *will not* do it. ASA M. HOLT.

East Haddam, Conn., Feb., 1851.

CLEANSING THE BARK OF FRUIT TREES.

THE operation should be performed in early spring, as well as in mid-summer. The rough, loose parts of the bark should be scraped off, as well as moss and other parasites. The bark should then be covered with the following mixture, as high as the operator can reach, with an ordinary long handle white-wash brush:

5 pounds whale oil soap,
1 pound fine salt,
1 pound fine sand,
2 pounds potash,
2 ounces nitrate of soda,

dissolved or mixed with water to the consistency of cream, and thoroughly rubbed upon the bark.

Many kinds of insects are kept from trees by a solution of whale oil soap alone, and many such as are resident in the crevices of the bark, are destroyed by salt. The fine sand is intended during the rubbing to scratch the outer coating of the bark, and thus assist the other ingredients for more perfect action. The potash and nitrate of soda will decompose or soften the dead parts of the bark, so that during the summer they will be thrown off by the healthy action of the growing bark. If the above mixture be applied in dry weather, it will become so hard as to remain during several showers, and thus have time to perform its office. Trees with smooth bark, such as the plum, many of the cherries, etc., should be rubbed with a wet rough woollen cloth in a few hours after applying the mixture; this rubbing will cause the sand to clean the surface so perfectly as to give the bark an improved and more healthy surface. Trees so cleansed are not so likely to be revisited by insects as those left with their natural surfaces, nor are they as likely to become bark-bound. Indeed we have never known a tree to exhibit the disease called bark-bound, the surface of the trunk of which had been softened by a soap wash in early spring. The cherry, apricot, peach and nectarine are subject, when left to their natural state, to this disease, and it has usually been attributed to too rich or too moist a soil; and under-draining and slitting the bark lengthwise with the knife are the usual remedies. The one is expensive, and often impossible where choice trees are planted, and the other is barbarous and unsightly, causing ex-

tion of gum, and consequent canker. In any case, a few applications of soap to the surface of the part hide-bound, will remove the difficulty, and the mixture before recommended may be applied, slightly warmed, when required to soften the bark of a hide-bound tree.—*Prof. Mapes.*

Protecting Half-Hardy Plants.

[Extract of a letter from DAVID THOMAS.]

EVERGREENS are believed to afford a better protection to half-hardy plants than dry vegetable matter; and when thickly applied to shrubs and young trees, and banded, succeed remarkably well. But in this climate it is dangerous to remove the covering much before the close of the 4th month. Unless the plants be making vigorous and etiolated shoots, (as the Greville rose is apt to do) it will be better to let every thing remain till the danger from even severe white frost is past.

A fine young tree of the Pride of India (*Melia azedarach*) four or five feet high, I once thoroughly and thickly encased with hemlock boughs; and though I have now no hope that a plant so decidedly southern will ever endure our winters without the most ample protection, yet when I removed the bandages early in spring, there were no traces of damage from the cold. A warm spell about the middle of 4th month, however, which tempted me to trust it, was succeeded by severe weather, and it perished. The sun had been allowed to shine on its frozen limbs, and the rough winds to chafe them. I have never repeated the experiment.

For low evergreen plants, such as the Auricula, or Primrose, a cabbage leaf answers

completely; and nothing can be more conveniently procured. * * * * *

When walking in the garden after the snow went off, I was pleased to observe how slight a covering was sufficient to protect half-hardy shrubs. Late in autumn, I had laid the Chromatella, Souvenir de Malmaison, and Solfatarre, flat on the ground, covering them but slightly yet sufficiently to prevent their radiating heat to the open sky; and there repose, uninjured by more than 30° of frost. Without this intervention, as a correspondent remarked to me in a letter, "they would have died half a dozen deaths."

Albany Cultivator.

Utility of the Cultivation of Flowers.

THE chaplain of the Utica Asylum for the Insane, writes: "The Institution with which I am connected is flourishing. It is mournful to see so many persons bereft, in different degrees, of reason; and the more especially when we consider that very few of them have become so by the sovereign providence of God; and that in the large proportion of cases, it is traceable to early misgovernment, intemperance, prodigality, mortified ambition, etc. Let us feel the importance of cultivating temperance, self-government, intellectual and moral sources of enjoyment, and above all, the affections of religion,—as the greatest sources of happiness to our children and to all. It should not be forgotten that the *love of home, the cultivation of fruits and flowers*, and all those employments which enliven and bless home, were intended by God to contribute to mental equanimity."

Albany Cultivator.

CHARCOAL PEAT.

ALL European Agricultural writers are loud in praise of charcoal peat; and if they could get the millions of loads of old charcoal hearths lying unused in the woods of New York and New Jersey, they would find them equally valuable. Or if they would decompose their salt marsh bogs, or what is still preferable, their fresh bogs with the salt and lime mixture, (chloride of lime and carbonate of soda) as we have done with the ditchings of our salt meadows in Essex county, N. J., they would find that this simple process would

give to this organic matter all they claim for the pretended newly discovered properties of charred peat. If our foreign exchanges will read the early numbers of our paper, they will find that the virtues of charred peat are not, as stated by them, the discovery of the last year.—*Working Farmer.*

The following are among the advantages claimed by a writer in *The Gardener's Chronicle*, from the use of Irish Peat Charcoal:

Geraniums.—These luxuriate in a mixture

of 3 oz. of pure charcoal to 1 lb. of mold. In this material they make good saleable plants in half the usual time. Cuttings strike freely, either in the pure charcoal, or in the mixture.

Cucumbers.—For these, I mixed the charred peat with mold during winter, and when the plants were put into it, they grew famously, and produced a heavy crop. The peat charcoal not only yields nutriment, but it affords good drainage. Cucumber tops strike root freely in pure charred peat.

Melons.—These succeeded in a mixture of charred peat and soil equally well with the cucumbers; and if a large proportion of the soil consists of peat, I am of opinion that the flavor of the fruit will be improved, more especially in cloudy sunless seasons.

Strawberries grow admirably in charred peat mixed with soil, and in the case of pot plants they like a good handful of pure peat placed in the bottoms of the pots. This latter has a tendency to prevent the ingress of worms, who do not appear to like its sharp edges.

Vines.—I have not tried the effect of charred peat on vines; but, judging from analogous cases, I am certain that it will prove of much advantage to them, not only as a fertilizer, but also as a means of keeping the borders porous, and thereby bringing better into action the materials of which they may be composed. Under such an arrangement, finer flavored fruit may be expected.

Potatoes.—I have found those manured with charred peat drier and more mealy than others to which farm-yard manure was applied. In the former the foliage and stalks are more compact and firm, and when taken up the tubers were found to be clean skinned. In my case no wire-worm came near them. Where potatoes are pitted in long ridges, in the open ground, a layer of peat between them and the soil helps to keep them dry, and if this heap could be covered with it below the straw, it would also be an advantage.

In flower gardens, peat charcoal will be found invaluable, including, as it does, quick growth; but not over luxuriant, and consequently plenty of blossoms. Under its influence the colors of the latter are also well "brought out."

For sweetening cesspools, and other unavoidable nuisances, peat charcoal finely pound-

ed will be found universally useful. I say finely pounded, because the more intimately it is mixed with the material to be disinfected, the greater will be its power.

One pound of charred peat takes one-eighth of a pound of water to saturate it, and hence, in addition to its sweetening qualities, it possesses great value in giving night-soil mixed with urine, such a consistency as to render it capable of being transferred from our large cities, where it is not wanted, to our rural districts, where it is wanted, and where it will assist our at present distressed agriculturists to farm more highly. In this way "a plague may be turned into a profit."

The experiments mentioned above were all tried last year. This season I have found that if, instead of horse-dung being turned and sweetened for a month before it is used for forcing, it is allowed about a week's laying, and then put into a four-light pit and covered over with an inch of peat charcoal, all will be well. Under this system, by the time my cucumber plants came up, all smell was removed. Again, gardeners are much annoyed in January and February by plants damping off. I dusted my cucumber plants in the pans every morning with peat, and I did not lose six out of six hundred. I have, unfortunately had to repeat the experiment, on account of my lad having overheated the flue, and burned the whole of the interior of my pit. I have again about six hundred plants dusted with peat, and they look as well as the first did. In filling the pots, I made holes in the mold with my finger, and dropped the cucumber plants in, in the manner in which leeks are planted out of doors. I then filled up the hole with peat. Those treated in this way thrived better than the others, and produced a more healthy dark green leaf. In short, I consider charred peat in a melon ground to be as necessary as a telegraph to a railroad. The one is incomplete without the other. The sort of charred peat that I use is the granulated kind.

The Peach Crop.

THE Hightstown Record says the indications in that vicinity (the peach-growing regions of New Jersey) are not favorable to a large crop. Many of the cultivators have cut down a portion of their trees.

RULES FOR PLANTING TREES.

A TREE, shrub, or cane, badly planted, will dwindle for years without dying or growing. It makes a little growth in one part, it is true, and dies back in another; but it makes no progress, it gets no further as it were. It is unhealthy from the first, and keeps so. Take up such a tree, and you will find the root as unhealthy as the top; the ragged ends of the shoots that have been buried, on taking up, are moldy or rotten, or there is an absence of white fibers and young spreading roots. We wonder how it is that trees do not flourish, and the whole cause is in the planting and pruning. Now, whether we have a gooseberry bush, a raspberry cane, or a fruit tree, certain rules must be attended to, and if they be neglected, the result is generally a failure. A good deal of mischief is done in the taking up of plants; the roots are chopped off with the spade, or torn asunder by main force, and if we plant such without using the means to prevent it, they must linger and die—whereas, it is possible to counteract it altogether by a little judicious attention. Let us suppose we have a tree with a good many of the roots broken, some chopped off, here and there a root split, and that we have that or none to plant, our plan is safe and simple: first, cut off all bruised ends with a clean cut; next, cut all broken ones off, and smooth the stumps to leave no vestige of a bruise, and cut away all split ones, beyond where the split reaches. Now, we have a tree with the portion out of the ground suddenly deprived of more than half its nourishment; the mischief of this can only be counteracted by taking away half the head. Cut away every thing but the few main branches that can be left standing out all round, and if that does not take away pretty well half the growing part, cut back even the main branches; then you may plant and calculate on having a healthy tree, however much less it may be; and a year's healthy growth will set all to rights, because the head will break out in twenty places where perhaps only five are wanting; all we have to do is, when the buds are first shooting, to rub off all but those which will form branches in the right place. Now the gooseberry or currant bush requires the same care: the less the roots are damaged, the less they have to lose; but when-

ever so carefully taken up there will often be some broken, bruised, and split ones, and these must be pruned away. There is nothing more fatal to roots than bruising; the dry or mildew rot will take place, and the root shoot will probably die back. Where, therefore, a root has been much mutilated, it is impossible the tree can do well without proper root-pruning. Next, as to the planting itself. The collar of the plant must not be put below the surface; the root must not be any deeper than it was before. Deep planting leads to dwindling for years, the absence of bearing, and perhaps decline. Let the earth be loosened a good bit round every tree, and spread the roots round: the best way is to dig the hole much too large and too deep, and then fill in the soil again in the bottom, highest in the middle or outside, according as the root is shaped; but if there be any root growing downward like a carrot, which style of root is called a tap root, let it be cut up close. Then placing, and getting some one to hold the tree in its right position, crumble in all the soil between the roots, and settle it by moving about the tree, right and left, until it is pretty well packed up with soil between the roots, when you may tread it firm, beginning all round at about the distance of the points of the root, and moving inward till you press close to the trunk. Planting, so conducted, never fails, and therefore repays us for all trouble we have to take. Whatever be the consequence, then, never plant a root with a bruised, split or broken part, however small, and never plant deeper than you can help. When planted, drive stakes in to fasten the tree, so that no wind can disturb it.

Glenny's Garden Almanac.

BEST WATER FOR PLANTS.—It is well known that rain water is much better than spring water for promoting the growth of plants: this is owing to the former containing ammonia, and which is abundant in liquid manure. Pounded carbonate of ammonia mixed with water will quickly show the efficacy, when sprinkled on grass.

FRUIT CULTURE IN THE SOUTH.*

HAVING in a previous article disposed of those divisions of our subject which relate to the selection of trees, and of transplanting; and having alluded to the question of *acclimation*, it may be well to explain what we mean by the term.

The best definition we have met with, of the relative meaning of the term *acclimation* and *naturalization*, as applied to plants, is to be found in Brande's Encyclopedia of Science. Acclimation is "the art of cultivating exotic plants so as to inure them to a climate different to that which is natural to them. An *acclimated* plant or animal differs from a *naturalized* one, in always requiring the assistance of art for its continuance in the adopted climate; the *naturalized* plant or animal continuing its kind without any care from man. The capacities of different plants and animals for being acclimated or naturalized, vary, but not to the extent that at first sight may be imagined; what passes under these terms being frequently nothing more than the fortunate discovery that some plant or animal, which had hitherto been found in a warm climate, would thrive equally well in a cold one."

We view and employ the term *acclimation*, as applied to fruit trees in the present instance, to be a *re-habitation* of individual varieties, which, themselves, may have been produced in more northern latitudes; but of which the original *species* were not necessarily *exotic* here; being, in most instances, natives of climates equally warm.

Horticulturists are well aware, that a seedling oak of the hardest species, may be so grown in the temperature of a hot-house, as to be no longer capable of enduring a degree of cold which would be anything but inju-

rious to another seedling of the same species, habituated to it from the first; and that plants propagated by layers, grafting, or otherwise, from the parent tree thus rendered delicate, may be *re-habituated* to its original climate—*acclimated*, as we view it, in the instance before us.

In the South we have the opposite of this. For example—the Peach and the Nectarine, natives originally of Persia and Hindostan, have been propagated for generations in more northern climates, by seeds and otherwise, until they have acquired a degree of hardness which enables them to endure these climates—the habit of growth and the texture of wood and bark having gradually become adapted to their vicissitude. To give an individual instance—suppose a seedling peach tree, grown in Mississippi, to be carried to New York or New Jersey; the first winter will, not unfrequently, see it cut down by frost—the texture of its wood and bark, and its habit of growth not being calculated to contend with a period of growth so greatly shortened, and a degree of cold so extreme. On that tree, however, being propagated from, by having its buds inserted into northern grown seedlings, the variety soon becomes *acclimated*, in the usual meaning of the term—but these very trees, on being returned to the native region of the parent, having adapted themselves to a climate so different, are no longer qualified to grow thriftilly and produce fruit, until there acclimated, or re-habituated. The wood, the stem and branches which they have made in the north, do not expand freely; so that the young growth, having the texture necessary to a warmer climate, *overgrows* the other; a degree of warmth, in the spring, which will not swell a

* Copy of an article published in the New Orleans Picayune, December, 1850.

bud in acclimated trees, expands every blossom, to be cut off by the frosts that so surely follow, and the long continued summer's heat causes every leaf to drop, while native or acclimated trees continue green and vigorous.

And all this follows, whether the parent tree be of northern or southern *origin*.

The plum, the cherry, the apricot, and the pear, were all originally from countries whose temperature and climates were more nearly allied to those of these Southern States, than to the climate of those of the North or West, yet the varieties there produced must be re-habituated, or acclimated, before they will prove fruitful here.

The apple is found, in its original state, in many latitudes. The native crab-apple of the South is infinitely superior in size and productiveness, to that of any more northern region. We may, then, naturally suppose that acclimation is all that is needed to render a great majority of the improved varieties vigorous and productive, and such, experience proves to be the fact.

Sufficient has been said to sustain our theory. That theory has, long since, been fully sustained by experience. We might, with the utmost confidence, cite any Southern fruit-grower, who has purchased a northern grown tree, to prove the fact. Many thousands of dollars have been thus worse than thrown away; having resulted in such a degree of discouragement and disappointment, as to lead, in too many instances, to an entire abandonment of the experiment of fruit-growing. Not only had the radical defect of a want of acclimation in these northern trees, to be contended with, but the injury, as well, which the trees sustained in their long, and often, greatly protracted journey.

When on the question of the effects of climate, we may point out another fact—a vigor of growth, and with it a power of endurance is imparted to trees and plants in this

climate which enables them to resist, uninjured, a degree of cold, which destroys, or greatly affects, the northern-grown plant.

We can, at this moment, point to many such instances. The severe spell of weather just tapering off, during which, on the nights of Saturday, Sunday and Monday last, the 7th, 8th and 9th inst., (Dec. 1850,) the thermometer fell to 23 and 24 deg., the ground being frozen to a great and unusual depth, every twig and leaf being inclosed in a thick coating of ice, from the sleet of Friday, and which the bright and warm sun has not entirely dissolved until to-day, (Tuesday,)—many unacclimated plants are seriously injured, whilst vigorous young specimens, propagated from them, stand untouched. The magnolias are not in the least degree injured, nor their growth affected. What of those puny specimens we have seen about Philadelphia and New York, with all the protection afforded? Although so great and sudden a change as our trees have experienced, is there never felt, we have seen the China tree—*Melia azedarach*—grow off thriftily, far to the north of us, until weakened by [a want of] that degree of warmth needful to it, when it gradually dwindled, and became stunted. We have seen peach-trees brought from Southern Tennessee to Cincinnati, and form thriftier trees than those grown there from seed.

The effect of climate upon the grains and vegetables, is well known. It is a common practice among planters, when their supply of corn is likely to give out before the regular crop of the current year may be ready for use, to plant a few acres of what is known amongst us as *boat-corn*—the growth of Ohio or Kentucky. This, on being planted here, matures some four to six weeks earlier than our Southern corn; giving, at the same time, a lighter yield of inferior grain. The stalk is shorter, and foliage much more scanty—it

becomes gradually acclimated, however, making a better growth, with larger yield. What we wish to point out is this *fact*—that the living plants from boat corn, growing side by side, row for row, with those from Southern-grown seed, *are cut to the ground*, by a spring frost which *leaves the other injured*.
T. A.

GENERAL REMARKS ON THE MANAGEMENT OF THE ATMOSPHERE OF HOT-HOUSES.

ONE of the most prevalent errors, and one of very considerable importance, consists in reversing the natural condition of the atmosphere in regard to the artificial regulation of the temperature during the night. The artificial climate is not rendered natural by adjusting it to the heat and light of the sun. In cloudy weather, and during night, the artificial atmosphere is kept hot by fires, and by excluding the external air; while, in clear days and during sunshine, fires are left off, or allowed to decline, the external atmosphere is admitted, and the internal atmosphere is reduced to the temperature of the air without. As heat in nature is the result of the shining of the sun, it follows that when there is most light there is most heat; but the practice in managing hot-houses is generally the reverse.

"A Gardener," observes Knight, "generally treats his plants as he would wish to be treated himself, and consequently, though the aggregate temperature of his house be nearly what it ought to be, its temperature during the night, relatively to that of the day, is almost always too high.

"It is very doubtful if any point in exotic horticulture is less attended to than that which is involved in this question. We are too apt to forget that plants not only have their periodical rest of winter and summer, but they have also their diurnal periods of repose. Night and its accompanying refreshments, are just as necessary to them as to animals. In all nature, the temperature of night falls below that of day, and thus, the great cause of vital excitement is diminished, perspiration is stopped, and the plant parts with none of its aqueous particles, although it continues to imbibe by all its green surface as well as by its roots. The processes of assimilation are suspended. No digestion of food and conversion of it into organized matter takes place, and instead of decomposing carbonic acid by the extrication of oxygen,

they part with carbonic acid, and rob the atmosphere of its oxygen, thus deteriorating the air at night. It is, therefore, most important that the temperature of glass-houses of every kind should, under all circumstances whatever, be lower during the night than the minimum temperature of the day; and this ought to take place to a greater extent than is generally imagined among practical gardeners.

"Plants, it is true, thrive well, and many species of fruit attain their greatest state of perfection in some situations within the tropics, where the temperature in the shade does not vary in the day and night more than seven or eight degrees; but in these climates the plant is exposed during the day to the full blaze of the tropical sun, and early in the night it is regularly drenched with heavy wetting dews, and, consequently, it is very differently circumstanced in the day and night, though the temperature of the air in the shade, at both periods, be very nearly the same. * * * I have been led," he says, "during the last three years, to try the effects of keeping up a much higher temperature during the day than during the night. * *

"Another ill effect of high night temperature is, that it exhausts the excitability of the tree much more rapidly than it promotes the growth, or accelerates the maturation of the fruit, which is, in consequence, ill supplied with nutriment at the period of its ripening, when most nutriment is probably wanted. The Muscat and Alexandria grapes, and some other late grapes, are often seen to wither upon the branch in a very imperfect state of maturity, and the want of richness and flavor in other forced fruit is, we are very confident, often attributable to the same cause. There are few peach houses or graperies in this country in which the night temperature does not exceed, during the months of April and May, that of the warmest valleys of Jamaica, in the hottest period of the year. And

there are probably as few hot-houses in which the trees are not more strongly stimulated by the close and damp air of the night, than by the temperature of the dry air of the noon of the following day. The practice which occasions this can not be right; it is in direct opposition to nature." *

We have fully satisfied ourselves that a high night temperature is injurious to plants of any description, kept under glass, and that green-house plants not only expand their flowers more perfectly, but continue much longer in bloom, when the temperature of the house is reduced at night by the admission of air or otherwise. In like manner, fruits are not only better flavored—a fact generally admitted—but also better colored, and more perfect in form, by a low temperature at night. On the other hand, too much air is generally admitted during the day. * * *

The imitation of warm climates in winter, for the purpose of preserving tender plants, must not be confounded with the artificial climate created in a hot-house for the purpose of forcing or accelerating foreign or native productions. As two different objects are sought for, different courses of procedure must be adopted. All that is necessary for the preservation of green-house plants, is to keep the atmosphere at night a few degrees above the freezing point; and, indeed, if a proper attention be paid to the plants, so as to avoid an excess of moisture, there is scarcely any kind of what are generally termed hot-house plants, that will not thrive well enough under similar treatment. We have often allowed our plant-houses to fall below the freezing point in very severe nights; and when long continued frosts set in, the plant-houses should be gradually inured to bear even a few degrees of frost below 32°; and this the plants will do without injury, if they be kept in a proper condition. When the external atmosphere is dry and mild, air should be admitted freely to the green-house during winter, but closed early in the afternoon, so as to preserve a portion of the warmth generated by the sun's rays within the house, to maintain a slight degree of heat in the house before the heating apparatus is set to work.

The accelerating, or forcing, of the vegetables and fruits of temperate climates into

a state of premature production is somewhat different, and more difficult, than the preservation of plants during winter. The constitutions of the various fruit-bearing plants, as vines, etc., require atmospheres of different temperature and moisture, and their success is dependent upon many contingent circumstances, which never occur in the mere preservation of green-house plants. * * *

The following rules, however, may be safely stated, as deserving especial attention from the gardener in charge of hot-houses:

1. Moisture is *most* required in the atmosphere by plants when they first begin to grow, and *least* when their periodical growth is completed.

2. The quantity of atmospheric moisture required by plants is, *ceteris paribus*, in inverse proportion to the distance from the equator of the countries which they naturally inhabit.

3. Plants with annual stems require more than those with ligneous stems.

4. The amount of moisture in the air most suitable to plants at rest, is in inverse proportion to the quantity of aqueous matter they, at that time, contain. Hence the dryness required in the atmosphere, by succulent plants, when at rest.

Moisture in the atmosphere, then, is absolutely necessary to all plants, when they are in a state of rapid growth, partly because it prevents the action of the perspiration becoming too violent, as it always does in a high and dry atmosphere, and partly because, under such circumstances, a considerable quantity of aqueous food is absorbed from the atmosphere, in addition to that drawn from the soil by the roots.

Excessive moisture is injurious to vegetables in winter, when their digestive and decomposing powers are feeble, and evaporation from the soil should rather be intercepted than otherwise, except when the atmosphere is dried to an unhealthy degree, by the use of fire heat.—*Leuchar on Hot-Houses.*

Scientific Agriculture.

PROFESSOR MAPES, editor of the *Working Farmer*, has raised fifteen hundred bushels of parsnips per acre, nine hundred bushels of carrots per acre, and eight hundred bushels of turnips per acre, by proper preparation of the soil.

* Loudon's Encyclopedia of Gardening.

POMOLOGICAL CONGRESS REPORTS.

CONTINUED.

Report of Maine.

BY HENRY LITTLE.

In some districts, Maine has shared with other portions of the country, to a gratifying extent, in the impulse recently given to the cultivation of fruit. For several years it has been generally admitted among the well informed, that this State is well adapted to the culture of the apple, in all but a few varieties; and even these—such as the Newtown Pippin, and Esopus Spitzenburgh—may be found to do better when grown in the more fertile soils, lying further from the sea coast, where they have not yet been tried.

The less productive and easily exhausted lands lying along the coast, from twenty to thirty miles in width, do not afford fair evidence of the agricultural capacity of the State in relation to any crop. Yet this has been the field upon which an imperfect culture has been sufficient to prove that the apple may be profitably and abundantly grown, and to give good hope of the pear and plum, when tried under good culture. At this time, new plantations are being made as well in the older lands under a redeeming management, as in the newer and more fertile soils, to yield a few years hence, rich and ample harvests. The application of scientific discoveries in the practice of horticulture, has been but little attempted, as the knowledge of them and the resulting benefits is diffused, and the capacity of soil better developed by deep tillage and draining, we look for confirmation of the most sanguine expectations of the few earnest cultivators who have learned that long cold winters have a compensating though brief warmth of summer, and that the long rest affords a corresponding energy of vital powers in vegetable life, manifested in rich stores of juices, and rapidity of growth.

Numerous gardens and orchards have been planted with choice varieties of the pear and plum, in the last four or five years, of which the plums already make a very gratifying return. The recent annual exhibition of the Bangor Horticultural Society, displayed handsome specimens of nearly all the known good varieties of this fruit. The whole family of the Gages, led off by the Reine Claude, and nobly supported by the McLaughlin, (a Ban-

gor seedling of this family), of the true Reine Claude or Green Gage flavor, and of much larger size; the Jefferson, Washington, Lombard, Orange, Columbia, Magnum Bonum, Imperial Ottoman, and Purple Favorite, all indeed that are recommended as worthy of extensive cultivation, had been grown upon trees recently planted, (1846-7-8,) and the trees have been healthy, rapid growers, uninjured by cold or heat, or other alternations, while the fruit attained a high excellence of appearance and flavor. This season has been unusually wet and backward, yet the Autumn Gage, Coe's Golden Drop, and Reine Claude de Bavay, promise to attain perfect maturity, if mild weather continue to the first or fifth of October.

By trenching, or otherwise affording depth of soil, kept in good condition, by such drainage as shall keep it free of excessive humidity, and yet porous; by so pruning, or rather so refraining from the cruel treatment called pruning, that the trees shall have the shelter of the foliage against the scorching sun, alternating with the cool nights and dews of summer; and by such other methods as experience shall suggest, it is believed the pear may be grown in this State with success, remunerative at least, if not so highly profitable as the apple and plum. This fruit, worked upon the Angers Quince, has been lately introduced to the extent of one thousand or two thousand trees, and arrangements are making for a more extended planting of them. So far they have done well, they come early into bearing, and are found to be quite hardy.

The apple is beginning to be cultivated to a considerable extent as far north as Woodstock, New Brunswick. Of this fruit, Williams' Favorite, Sops of Wine, (known with us as Bell's Early,) Gravenstein, Porter, Ribston Pippin, and Rhode Island Greening, are popular with us; to these, we may add the Duchess of Oldenburg, Sweet Bough, Danvers Winter Sweet, and many others.

Of pears, the Vicar of Wakefield, Louise Bonne de Jersey, and Flemish Beauty, are among the many now cultivated with good success.

Nearly every variety of the plum recom-

mended by Mr. Downing, thrives well in our State.

On the Penobscot river, and wherever it is known in Maine, the McLaughlin plum is the most popular of all others. The Jefferson is also extensively cultivated, particularly in Penobscot and York counties, and is a very productive and a first rate fruit. These two varieties should be found in every garden in our State, since they unite so many very desirable qualities.

All which is respectfully submitted.

Bangor, September, 1850.

Report of Vermont.

BY C. GOODRICH.

AS THERE has been no State organization for a Horticultural Society, if we except a Pomological Convention in October last, when but a small portion of our small territory was represented, and an attempt then made to form a Horticultural Society: and as but little attention has been given to fruit by the county agricultural societies, whose reports seldom give any information more than that A. had the best apples, B. the best pears, and C. the best plums—a State report must necessarily be very vague and indefinite.

Orchards were numerous planted in the southern part of the State, on both sides of the mountain, prior to the American Revolution, while the valley of Lake Champlain and the whole northern part of the State was not settled until after 1783. Among the early acts of the State legislature, was one exempting from taxation all land on which forty apple trees to the acre were planted; this gave a great impetus to planting apple trees, every farm had its orchards, large quantities of apple or cider brandy were made for exportation, and cider was very plenty.

During the temperance excitement, fifteen or twenty years since, many of the best old orchards in the State were cut down, and but little attention given to planting new ones.

For a few years past there has been an entire change—nurseries from one to six years old are very common, and thousands of trees are now planted yearly, in many places on the same ground where a few years since a good orchard was cut down.

The condition of old orchards depends very much on the geological character of the soil. In portions of the State where plenty of lime

exists in the soil, the orchards are generally healthy; in other portions, where there is little or no lime, the orchards, to use a farmer's phrase, have "run out;" but in all such places, with proper culture, and lime or ashes freely applied, they grow with renewed vigor.

There are many favorite seedling apples cultivated, known only by local names; some very superior. Also many foreign varieties, introduced from Canada by early settlers, many of which are known by names given them by the growers. The oldest trees on Lake Champlain are at Chimney Point, opposite the old Fort of Crown Point. These were planted by the French, more than a century since, and in the only place on the east or Vermont side of the Lake, occupied by the French while Canada was a province of France.

Scions from these trees have been extensively scattered under the name of the "Chimney apples," and prove identical with the Fameuse, Pomme de Neige, or Snow Apple. It seems hardly probable, that an apple *originating* in Montreal, should have acquired such a reputation one hundred years since as to be propagated abroad.

Among apples generally cultivated in Vermont, are many seedlings of merit; also, foreign varieties, with the true names unknown. Of apples well known, and which have been sufficiently tested to speak with confidence, the following may be called first rate in our climate:

Early Harvest, Bough, St. Lawrence, Sops of Wine, Gravenstein, Hubbardston Nonsuch, Roxbury Russet, Rhode Island Greening, Yellow Bellefleur, Danvers Winter Sweet, Red Astrachan, Duchess of Oldenburgh, (for cooking,) Fameuse, Porter, Baldwin, Jonathan, Westfield Seek-no-further, Pomme Grise, Red Gilliflower.

Among our favorite apples are the Esopus Spitzenburgh, and Newtown Pippin—the first is one of the most common, but is apt to be spotted. The climate in most of Vermont seems not adapted to them. In favorable locations and good seasons, both are first rate. No apple grows better than the Northern Spy, or appears more hardy; but it has not yet fruited. The varieties lately introduced are very numerous, a large portion of which have not fruited, or not sufficiently and long enough to try them fully.

The White Doyenné stands at the head of pears in all parts of the State, where pears are grown. In this town the Spanish Bon Chrétien is one of the most common; introduced among the first from Montreal. Until a few years it has been very productive and fair, but it has become small, spotted and cracked, so as to be worthless in most gardens, in the same manner as the White Doyenné in other parts of the country. No "special manures" seem to remedy it. I have six trees of this variety which I have partially grafted with other varieties, and while the Bon Chrétien is spotted and cracked, worthless, and not one-fourth as large as ten years since, the Bloodgood, Bartlett, White Doyenné, Belle Lucratif, Glout Morceau, Frederick of Wurtemberg, and Flemish Beauty, on the same trees, are large and fair—Bourré Gris, poor. These are all the varieties which I have tried on them that have fruited.

There are numerous seedling pears which are favorites in their several localities, in most cases from want of a knowledge of better ones. Some of these are decidedly first rate. But few pears have been cultivated here long enough to test them fully. Among those that promise well—some of which have fruited many years—the Bartlett, Bloodgood, Beurré Bosc, Golden Beurré, Beurré d'Arenberg, Andrews, Louise Bonne de Jersey, Rostiezer, Dearborn's Seedling, Winter Nelis, Vicar of Wakefield, Lewis, Glout Morceau, Heathcot, Seckel, and Fulton, are among the best. I have fine specimens of the Dix Pear growing on grafts but four years old.

OF PLUMS.—The Burlington Gage, a seedling of Burlington, a medium sized blue plum; the Lombard, and the Blue Imperatrice, are the three best for general culture, as we commonly have good crops of them when most others fail. The Canada, or wild plum, grows spontaneously in many parts of the State, and proves a valuable stock for grafting. The climate is favorable for the plum tree, and of more than forty varieties found here, but one (the Peach Plum,) which could not grow successfully; for this our climate seems too cold. Our trees are free from disease, and the Curculio is our principal enemy.

PEACHES AND QUINCES are hardly worth cultivating, though fair crops of both in the most favorable locations are not uncommon.

CHERRIES generally grow well. The Black Tartarian is our best variety.

OF GRAPES.—The native varieties of New England, with numerous local names, are mostly grown, and are now much sought after. The Isabella, White Chassellas, or Sweet Water, Miller's Burgundy, and others, ripen their fruit in good locations, but need protection in the winter. The Catawba is more hardy, but our seasons are too short for it to ripen well.

GOOSEBERRIES are easily grown, and with proper attention, uniformly produce great crops. The Green Walnut, for an early, and the Crown Bob, for a late variety, are the two best sorts. When refuse hay or straw, dipped in a strong brine, has been spread in the spring, about two inches thick under the bushes, I have never seen any mildew.

OF RASPBERRIES.—The Franconia is our best; hardy, and a great bearer. The Antwerps (yellow and red) grow well, and the canes are not winter killed, but the cold weather seems to injure their fruit bearing qualities.

STRAWBERRIES are so common in fields, that they are as yet very little grown in gardens, but produce abundantly with ordinary culture.

The past season has been rather cold and showery until about the first of August, since that time to the first of September, dry. Apples are less abundant, and generally not so good quality as last year. Of pears there is a full average crop. Some varieties of plum are abundant, while of others there are none. There is some mildew among grapes, generally. As a whole, the amount of fruit in the State is below an average in quality and quantity.

C. GOODRICH, Chairman of Fruit Committee of Vt. Pomological Convention.
Burlington, Sept. 2, 1850.

Report of Lenawee County, Mich.

BY W. H. SCOTT, 1850.

Chairman of the General Fruit Committee:

THE Fruit Committee of the Lenawee County Society have but a meager report to make. Until recently there has not been such an organization as the most effectually to exhibit the character of the fruit cultivation of this part of the State. Those who

have been the most devoted to the improvement of fruits have generally found the result of their labors quite satisfactory, and have met with but few obstacles in the perfect maturing of most varieties.

The grape is, perhaps, the only fruit that has not abundant time to come to full maturity. The Isabella and most of the more hardy varieties ripen before the severe frosts; but the Catawba often does not have sufficient time.

The variety of soils in southern Michigan is such that there is abundant opportunity to test the comparative advantages of each for orchards. So far as I have observed, no trees present a more thrifty appearance, and yield better, than those on soils rather inclining to clay with a mixture of gravel. Insects are much less troublesome than on the sand; and young trees, and especially the cherry, do not make a growth so disproportionably rank as on light soil.

Taking all the fruits into consideration, the season has been full an average one in southern Michigan. The autumnal frosts came on so gradually last fall, that fruit buds were well matured. In December the thermometer fell once to 3° below zero; in February, once to zero. This was the coldest of the winter here. The uniformity of the cold through the winter was most favorable for fruit buds. But March, April, and May, were noted for severe frosts. There were eleven in May. Fortunately it was very dry, and the same injury was not done to the blossoms as if the month had been ordinarily wet. The peach orchards on rather low ground were seriously affected by these late spring frosts, and apples also in many instances. The apple crop will not be more than an average one.

APPLES.—Good progress has been made. I have not learned that any of the leading varieties, either in fruit or tree, have failed to do well where proper attention has been bestowed by the cultivator. The Quakers, who are among the oldest residents of Lenawee county, and constitute quite a large proportion of the thorough fruit growers in this region, have some of the finest apple orchards. These orchards have been planted on almost every variety of soil and locality capable of producing farm crops. I have seen none looking and producing better than those planted on clay, where the soil contained

a mixture of gravel, and were sufficiently rolling to carry off quickly all surface water. The best mode of cultivation seems to be thorough plowing and no under crops. Insects have been unusually troublesome the past year.

The summer apples most cultivated are the Yellow Harvest, Sweet Bough, Summer Queen, and Spice Sweeting. Good specimens of the Early Strawberry, and Summer Rose, have been exhibited at the meetings of the society, but are not yet very generally cultivated. Among these none are gaining in popularity more rapidly or more deservedly than the Sweet Bough. Here the tree is always healthy, and bears generally a moderate crop of large and fair fruit.

Among fall apples, the Fall Pippin, Autumn Pearmain, Rambo, Holland Pippin, and Autumn Swaar, do well. Among the more common winter apples, so far as I have learned, none fail. The Newtown Pippin on clay soil does well. I have been told that there are trees on sandy land doing equally well, but have not seen them. Rhode Island Greenings invariably fine on either sand or clay. The Roxbury Russet, Tallman's Sweeting, Yellow Bellefleur, Spitzenburgh, English Russet, Swaar, Herefordshire Pearmain, Wine, Jonathan, Red and Black Gilliflower, are in most common cultivation. A choice of five of these would probably embrace the Rhode Island Greening, Spitzenburgh, Bellefleur, Roxbury Russet, and Swaar.

Less commonly cultivated, but excellent, are the Westfield Seek-no-further, and Belmont. I have not met with a cultivator of the Belmont who does not consider it either the best or among the best in a small list of winter apples. Next to this, all considered, I place the Yellow Bellefleur. The Northern Spy has not been sufficiently tested to speak of its merits.

PEARS.—The finer varieties have been so rarely cultivated until recently, that little can be said. Young trees of the better sort are fast coming on, and in three or four years nearly all now noted in other places may be tested here. So far, the pear has been very healthy, and I have scarcely met with a case of blight.

PEACHES.—More attention has been paid to this fruit. Nearly all of the best varieties have been tested, and succeed admirably, both

as to size and flavor, but good crops can not be depended on as often as in many other parts of the country. Quite a number of seedlings have been exhibited. As more reliance can be placed on these, for regular bearers, and for hardiness, than on the budded sorts, there is a very general disposition to encourage their cultivation. Orchards on high grounds have been quite overloaded. In some of the more elevated positions the crop has not failed since the trees commenced bearing; while in neighboring orchards on grounds twenty, thirty, or forty feet lower, the trees have not borne oftener than one year in three. I have seen an excellent example the past season of the relative advantages of slight elevation and a proximity to water. From the river Raisin, a small stream, there is a gradual ascent on one side of twenty-five or thirty feet in three quarters of a mile. At that distance the ascent is more abrupt to an elevation fifteen or twenty feet higher. On this highest ground the peach trees were loaded with fruit; just at its foot the trees have not borne; but as the river is approached the trees were more and more full, until quite near it they bore abundantly. I have heard of no cases of the Yellows. No worse enemy has appeared than the peach worm.

CHERRIES.—Considerable attention has been paid to this fruit. Among the leading varieties the Black Tartarian has been as popular as any; though our fruit committee have thus far given the preference to the Black Eagle for flavor. Fine specimens of the Napoleon Bigarreau, Elton, Mayduke, American Amber, Manning's Late Black Heart, Madison Bigarreau, Black Heart, Yellow Spanish, and White Bigarreau, have been exhibited; and several seedlings that may prove worthy of cultivation. Trees are sometimes attacked by sap blight, but not so frequently as in many portions of the country. This disease has been most troublesome to trees having a very rapid growth when young; and on sandy land.

PLUMS—Many of our leading fruit cultivators have exhibited a commendable perseverance in their efforts to grow plums. They have cultivated a large variety of the best; still, very few growers could spare the time to keep off the curculio, and as a consequence comparatively few have succeeded in saving

their plums. On the whole, the attention devoted to plum culture here, except by amateurs, is rather time wasted; and must be so until some more effectual remedy shall be found against the curculio.

GRAPES.—The season (at the time of making this report) has not arrived for a proper test. The Isabella is the only one of the good varieties very commonly cultivated. It generally has time to ripen well. A later grape is often touched by severe frosts before full sweetness is attained. The Catawba is subject to this drawback, and the south side of white-washed walls will be a necessary position for it. Fine clusters of the White Sweetwater have been exhibited. It requires protection through the winter. The taste for grapes has not become sufficiently refined to prevent the very general cultivation of the showy, but coarse and acid Fox grapes.

Report from Canada to the Pomological Congress, Cincinnati

OWING to a want of Pomological knowledge in Canada, and also to a lack of interest, apparently, in the subject, I have not been able to procure information from the different parts, so as to make up a satisfactory report to the Congress.

From the extent and varied climate of the Province, (embracing in its fruit-growing region nearly five degrees of latitude), it would be impossible for one report to do any thing like justice to the subject. I shall, therefore, in a great measure, in this, confine myself to my own experience, leaving to some future time (when better aided by reports from other parts of the Province) a more extended one, embracing, as much as possible, the whole of Canada.

I shall commence with small fruits in their rotation of ripening.

STRAWBERRIES.—Owing to the great drouth in the months of April and May, fears were entertained that this crop would be a total failure, but the rains from the 7th till the 9th of June, (the first, of any consequence, we had for nine weeks,) quite renovated them, and the crop was one of the best I ever saw here. Of fifteen varieties that I have fruited extensively, there are only a few that I consider worthy of extensive cultivation.

Burr's New Pine, I would place at the top of the list. If it continues, after longer

trial, to prove as good as it has done, its earliness and delicious flavor, together with its hardiness and productiveness, will fully entitle it to this.

Black Prince proves, with me, hardy and a great bearer, and, to my taste, it is a high flavored and excellent berry—and if pulled before being too ripe, it is one of the most beautiful.

Hovey's Seedling is a great bearer, and the fruit of largest size, but here it is very deficient in flavor, and rather dry.

Ross' Phanix, this year, was one of the greatest bearers, largest and finest flavored I had; but it is not always so, though as far as my experience goes, if protected, it is one of the best of the Staminate.

Swanston's Seedling, though large and of good flavor, does not, with me, come up to its character as one of the highest flavor.

Of those I have cultivated, I would recommend for general cultivation, *Burr's New Pine*, *Large Early Scarlet*, *Black Prince*, *Hovey's Seedling*, and *Hudson*, of Cincinnati. The latter is quite distinct from the *Hudson's Bay*, and is a much more prolific and better strawberry for general culture; the fruit is rather acid. There are probably others equal to some of these, but I have not yet tried them.

CURRENTS.—*May's Victoria*, *White Grape*, *White* and *Red Dutch*, *Black Naples*, and *Black English*, have all been bearing with me for some years.

May's Victoria proves highly valuable, and a most beautiful fruit; its greatest drawback is, that it is of rather a weak growing habit.

The *Red Dutch*, as it is a much more vigorous grower, and as great a bearer—the fruit being as large, though the bunches are not as long—will probably continue to be the most profitable market fruit.

White Grape is a very beautiful large currant, and is quite distinct in its growth and foliage from any other; it is also a valuable fruit.

White Dutch.—There appears to be a good deal of confusion as regards this variety. I have four distinct varieties, all procured as *White Dutch*, only two of which are valuable. One of these varieties I procured from Rochester; it is a very handsome pale colored fruit, with long bunches, ripening rather

late, and rather acid in flavor. The other I procured from Cleveland, the fruit of which is quite larger, more of an amber color, with shorter bunches, ripens earlier, and is much sweeter than the other—and, in my opinion, superior.

Black Naples, except for hanging long on the bush without shriveling—which the *Black English* does—is inferior in flavor to that variety, and is not larger in size. It has been praised, in my opinion, more than it deserves; but I think that there are several sub-varieties of the *Black English* in cultivation, probably accidental variations from seed, some of which are much larger than others, which may account for the different relative value placed upon it by some cultivators.

I think too little attention has been paid to the raising of currants, and other small fruits, from seed. It is so easily done, and they come into bearing so early—in general the third year—that I think intelligent cultivators who raise the fruit on a large scale, might, in many cases, raise their young plants from seed instead of cuttings; very few would be inferior to the kind of which the seed was planted, and some might be much superior. I have a large stock of young plants coming on from seed saved from the largest berries of *May's Victoria*, *White Grape*, etc.

GOOSEBERRIES.—Like all Scotchmen, I am rather prejudiced in favor of this fruit, and though it does not attain here the flavor that it does in a moister climate, still, by a judicious culture, it can be grown to great perfection. I have paid a great deal of attention to this fruit for the past fifteen years, and have raised many hundred varieties from seed, some of which have proved very superior, and, I flatter myself, more suitable to the climate than the greater part of the foreign varieties.

For several years after I moved to my present residence, my gooseberries were completely destroyed by mildew. The bushes then grew in a garden inclosed with a high, close board fence on three sides, and my house on the greater part of the other. Being satisfied that it was caused by the want of a proper circulation of air, I removed them to a place slightly elevated above the surrounding ground, and where the wind had free access to them on every side, and since then, some six years, I have never had a

mildew berry. I am, therefore, inclined to think, from this and other experiments, that more depends on situation and exposure than on soil, in the culture of this fruit.

The great heat and drought of our summers are very injurious to the gooseberry, and heavy rains in midsummer, followed by a hot sun, destroys a great number of bushes if on a retentive soil. In 1848, when six inches of rain fell in the course of three days in July, more than one half of my bushes were killed; a very hot sun followed the rain, and shriveled up the leaves, giving them the appearance of being boiled. One end of my plot, however, escaped entirely; it was the lowest, and had been the wettest, but had an under drain running through it; all within the influence of the drain continued to be perfectly healthy, while in other parts, where, owing to a retentive clay sub-soil, the water did not run off quickly, they all died. I infer from this, that the best mode of culture is to plant on rather elevated ground *thoroughly under drained*, where there is nothing to obstruct a free circulation of air; in addition, I would plant rather closely together, and cover the whole of the ground, to a depth of several inches, with tan bark, to keep the ground cool and moist. If this plan is followed, I am satisfied that excellent gooseberries can be grown free of mildew. Of course the ground must be well manured before putting on the tan bark.

Of imported varieties, I have found the Ocean to be the hardiest, strongest grower, greatest bearer, and most suitable for this climate of any I have tried, and where the fruit is to be used green, I would consider it the most profitable for market culture.

The *Warrington Red*, is decidedly the best gooseberry grown, for the dessert. The flavor is one of the finest, skin thin, and it will hang on the bush a month after all the others are past, (though ripening at the same time), and be as fine then as at first.

Houghton's Seedling, has not borne with me yet, but from its foliage, etc., it is evidently either a sub-variety, or a hybrid of the small, smooth red, wild gooseberry. Amongst five hundred seedlings that have borne fruit this year for the first time, with me, there is one that is evidently a hybrid from the wild prickly fruited variety. Its habit of growth is the same as that of its

wild parent; the young shoots grow very strong and upright, attaining four times the height of the strongest of the other seedlings beside it, and are covered with light brown prickles like the wild; the foliage is more like the wild than the tame. The fruit is red, of good flavor, and ripens at the same time as the English gooseberry, ten days before the wild, and is covered with hairs instead of prickles. I mean to plant it and the Houghton, beside some of the largest and finest flavored varieties, such as the Warrington, and save the seeds from both, in hopes of getting an improved variety perfectly adapted to this climate.

Several bushes of the wild prickly fruited gooseberry are growing on my lawn, not far from my other gooseberries, and I suppose the bees (of which I have plenty) have been the hybridizers. As the wild blossoms about ten days after the English, it must have been some of the earliest blossoms of the one that impregnated the latest of the other.

RASPBERRIES.—Of this fruit, I cultivate only the *Red* and *White Antwerp*, *Franconia*, and *Fastolf*. Of these, I prefer the two former, though the white is not so suitable for a market fruit. The *Fastolf*, I think, has been overrated; at least, in my soil, it is not much superior to the *Franconia*, and is not so strong a grower. The fruit is no comparison to the true *Red Antwerp*. The greatest fault of the *Antwerp* is their weaker growth; they therefore need high culture.

CHERRIES.—I have fruited a large number of different varieties this year, several of them only for the first time.

Early Purple Guigne commenced ripening this year on the 8th of June, and was fully ripe by the 13th, and escaped the birds, which eat nearly all my later ones. Taking all things into consideration, I consider it, as far as yet proven, one of the very best cherries, and only equalled in my opinion, for general cultivation, by the *Black Tartarian*. I have found the young trees pretty free growers, and the older trees are of handsome growth, and as large as the generality of its class of the same age.

Baumann's May commenced ripening on the 11th of June. It is also a valuable fruit on account of its earliness, though not equal in size, color, or flavor, to the previous. Owing to its ripening later, the red-headed

wood-peckers found them out, and finished them before I was aware; I however finished the wood-peckers, or at least as many of them as I could reach with my gun. I fancy I hear many, on reading this, saying: How barbarous! How behind the age! How little he knows of the use of birds, more especially wood-peckers! etc., etc. But let me tell these gentlemen that few of them have studied the natural history of birds more than I have, or watched them closer or more attentively in their haunts and habits, and therefore, I will not give up my views on the subject till they can bring some other argument of which I am not aware at present. The red-headed wood-pecker I consider a great pest, here at the North, as it does not winter with us, and does not make its appearance in our gardens until the fruit is ripe; and, therefore, does little good by killing insects to make up for the enormous quantities of fruit it destroys, which appears to be its principal food while here. The other wood-peckers that remain all the year with us, I would in no way injure, as they do more good than evil. Many other birds should be protected, such as the cat-bird, thrush, etc., etc., though they eat a great deal of fruit, still, as they are about the gardens from the commencement of the season, building their nests in the shrubbery, feeding their young with insects from our trees, and cheering us with their song; they more than pay us for their food. But there are some others, such as the cedar-bird, red-headed wood-pecker, and in some localities, such as this, where they are overly plenty, even the robin and Baltimore oriole, I would consider it no sin to destroy. Of course a just discrimination should be used, and the habits of the bird ascertained, as it is only those which commence resorting to the gardens when the fruit is ripe, and leave it as soon as it is over, that there would be any excuse for killing,—and that only in localities where they take all the fruit as it ripens. I would not object to their getting a moiety, or even two-thirds, but where they take all, as with me, and that before it is ripe, I have no hesitation in trying to reduce their numbers to a more reasonable extent. But when I began I did not intend to write a treatise on Ornithology, it is therefore time to return to our cherries.

Bowyer's Early Heart is undoubtedly

different from *Early White Heart*—it is considerably larger, a few days earlier, and all things considered, is much superior—so much so, that the propagation of the latter is not advisable.

Elton and *Bigarreau Couleur de Chair* appear to me to be identical, and as the latter is rather a jaw-breaking name to many, it should be discarded.

Belle Magnifique proves here, to be the best cherry of its class for the North, and the South, where the *Bigarreau* and *Heart* cherries do not succeed. The finer kinds of *Duke* and *Morello* cherries should be more extensively cultivated, and endeavors made to raise still better varieties from seed.

I have had very little trouble with the gum, so injurious to the cherry in Ohio, etc., but it may be owing to having planted my trees on the lawn, which has checked their over-growth, and prevented the bark bursting.

I consider the greater part of the *Heart* and *Bigarreau* cherries as ornamental trees for a lawn as any others, and very suitable for that purpose, combining the useful and ornamental.

APRICOT.—Owing to the ravages of the curculios, I have had very few apricots for the last few years; jarring the trees, which to a certain extent succeeds with plums, will not do with the apricot, for if you jar hard enough to bring down the curculios, you will bring down nearly all the fruit with them.

The only varieties that have ripened any fruit the last two seasons, are the *Breda* and a *Seedling*, the latter is the hardiest I have, an excellent large fruit, and a better bearer than the *Breda*.

Dubois' Early Golden is not yet in bearing with me, so I can not compare it with the preceding. My old trees of *Moorpark* and *Peach* were all winter killed two years ago, and even in the nursery rows, they suffered more than other varieties.

PLUM.—The same remark as regards the curculio, applies to the plum; from a couple of hundred large bearing trees of every variety, I did not save a bushel of fruit this season, even with constant jarring the trees; what I saved from the curculio being destroyed by the rot.

I have tried both dusting with lime, and white-washing the leaves and fruit, without any success, for as much of the fruit was

punctured by the curculio after white-washing as before, and the white-wash, though thin and kept some time before application, completely destroyed the fruit of an apricot tree, as after it was put on, the apricot ceased growing, and partly shrivelled on the side where the most wash had been applied. Though very few of the fruit were punctured when the wash was applied, the greater part were afterwards, and nearly all fell off with a worm in them; what few escaped and ripened, were nearly uneatable from the particles of lime adhering to the fruit, giving it a bitter taste; as the white-wash will not adhere to the plum, it is useless for that fruit. Dusting with lime to prevent the rot, I have also found to be useless; two trees that were dusted every day, rotted as much as those not dusted. A few years ago curculio and rot were unknown here, and we could raise the finest crops of plums, apricots and nectarines.

Is there any hope of these scourges passing away? Is any locality where they formerly prevailed now exempt? Luckily there are still many localities where the curculio is not found, or where they are so few in number as not to injure the general crop, and it is in these places where plums and apricots should be planted to supply less favored localities.

In Eastern Canada all the early and medium ripening varieties succeed admirably.

NECTARINES.—From the same causes, curculio and rot, I have had no fruit for the last two seasons.

PEACH.—This fruit has been little cultivated throughout the greater part of Western Canada, though it would no doubt do well if proper varieties were procured, and attention paid to having the trees planted in proper situations.

Here it succeeds admirably, and in ordinary seasons all the varieties ripen well, even the latest—such as *Monstrous Pomponne*, *Heath Cling*, *Druid Hill*, and *La Grange*, usually come to perfection; last season being a fortnight later than usual, some of these varieties did not come to perfection, though all ripened their fruit.

The great desideratum yet to be arrived at, is to raise an early peach, say equal to George the 4th, that will ripen about the time of the Nutmegs. I think if pits of the

first ripe and finest fruit were planted, and the fruit of those that proved earliest and finest planted again, that in a few generations the point would be gained.

Serrated leaved peaches in general can not be relied upon for a good crop, as some years the mildew affects them badly. The *Serrate Early York* is the one least subject to mildew of any of this class, and in general it can be depended upon.

The *Early Tillotson* fruited with me for first time this season, or rather it ripened its fruit for the first time, as the two former years the fruit was destroyed by mildew. It is the earliest peach I had this year, and were it not for its liability to mildew would be valuable.

My only bearing tree of *Early Malden*, was nearly destroyed by the red spider before I noticed it, and the fruit did not ripen well. I doubt, however, if it will prove much earlier, if any, than the *Serrate Early York*. The *curl* in the leaf is bad in this vicinity, but it is only a few years since it commenced here, it therefore, in my opinion, can not be caused by cold, as we must have had as severe weather formerly as now. I thought last year I had discovered the cause in very minute insect, but this year I could not find it, or any other insect.

It no doubt is injurious to the crop, causing a large portion of the fruit to drop, and retarding the growth of the tree, as also the ripening of the fruit.

GRAPES.—The *Isabella* and *Catawba* ripen regularly here, and I am satisfied as good crops of well ripened fruit, could be raised here of the latter as at Cincinnati.

The *Clinton* in the only native grape I have proved here, but I expect in another year to have the *Diana* in fruit. I have fruited a considerable number of seedlings, but have not proved them sufficiently to decide. One that fruited last year, appeared to me, to be nearly allied to the *Diana*. It did not bear this year.

The foreign grapes formerly did well in the open air, here, but for the last three years, they have been quite a failure, from the ravages of a small insect, I suppose to be the *thrips*.

PEARS.—Have been very healthy here till this season, and no fire blight has taken place as far as I am aware. A great number of

my trees have been attacked this year for the first time, by an insect that is quite new here, it appears to me to be one of the *aphis* species, but it does not attack the points of the young shoots like the common *aphis*; its favorite place is around the bud on the young shoots and spurs; and at the base of the petioles, where they are in large quantities, leaving the whole of the bud and shoots covered with a black excrement, of which flies and wasps appear to be fond. It is very injurious to trees, and those that are of weakly growth, are apparently affected by it in the same way as the fire blight is said to act.

A few of my bearing trees have been killed this fall by another insect, which I suppose is the insect blight. About the middle of September the trees were apparently in perfect health, when I gathered fruit from them to take to the Provincial Fair at Niagara, but on going to the trees on my return, to get specimens for this Congress, I found the trees dead. The sap had run out in large quantities at small holes, generally placed just below the first main limb. In cutting into the tree, I found the small holes went straight into the stem about half an inch, and in each one there was a small insect, something like the pea-bug, but smaller; in one tree there were five or six of these little holes in a cluster, each with its insect.

Is the insect the cause of the disease or the effect of it? I have not been able to procure a copy of Prof. Harris' work on insects, though I have been endeavoring to get some of the Detroit book-sellers to bring it

on for the last three years, and as I am no entomologist, I am not aware whether these are well known insects or not.

In East Canada the culture of the pear has been nearly discontinued, as the young trees nearly all get winter killed. There are, however, some very large old trees in the neighborhood of Montreal, in the gardens of the Seminary of St. Sulpice, of the Summer Bon Chrétien, and other old French varieties, which were planted when the country was first settled, by the priests of the Seminary, and which are still quite healthy, and bear well, though the apple trees planted at the same time, are long since gone, even the second and third generations of them.

M. Villeneuve, the Vice President of the Montreal Horticultural Society, and the priest who has charge of the gardens of the Seminary, informed my brother, who called upon him to inquire, why it was that the pear succeeded formerly, where it would not stand the winter now? that the only difficulty in the culture of the pear was to protect the young trees till they got the rough bark on, after which they were as hardy as the oak. The method they formerly adopted, and which they still practiced to protect them, was at the commencement of winter to wind a straw rope around the stem, and as far up the branches as possible, this was found to be ample protection.

In closing these remarks, I must apologize for the great length to which they have been drawn out.

JAMES DOUGALL.

Rosebank, near Amherstburgh, Canada West, Oct. 1, 1850.

HOW TO MISMANAGE A GARDEN.

PROCRASTINATION.

THE noble art of mismanagement is not to be lightly acquired. It demands skill and patience, no less than good management; and although some are more celebrated for it than others, yet in all cases it will be found that it is the result of perseverance in certain fundamental principles; such principles are not, however, always self-evident; some skillful possessors of the art conceal their method so admirably that it is only by the result that their greatness becomes visible; and in this they strictly observe the precept of the

first masters of antiquity, who declared that the high of art consists in concealing art. One of the most important of these principles is never to do to-day what can possibly be put off till some other day. This may indeed seem contrary to the maxim which school-boys are taught to copy—that procrastination is the thief of time; but in the first place, such rules, which are merely the expression of dull common sense, are not to be held binding upon geniuses, and, in the next place, this particular maxim supposes

that time is valuable. It can not be said that a thing is stolen which, because of its worthlessness or abundance, is regarded as free to all men's use. When a man stoops down to drink from a river, he can not be said to steal the water, because it is valueless and is common property. So, in like manner, time can not be said to be stolen, if it is worthless, and cast away by its owner. Now, it is to be observed, that nothing is more valueless to an accomplished mismanager than this very article of time—he has plenty of it, and to spare—it is of such small importance that it glides away before he has discovered that he possessed it; and, therefore, procrastination can not be truly said to steal it.

It may be assumed, then, that putting off is a cardinal virtue in the life of a mismanager; in fact, it will have to be used as the center-stone of the triumphal arch which must one day be raised to the memory of some worthy of the class—more celebrated than any who yet have lived.

It has its inconveniences, to be sure; but there is no unmixed good in this world. Mismanagers, of no small pretensions, sometimes lose places by not looking after them soon enough—some troublesome, active fellow stepping in before them. Cases have occurred of situations being forfeited, because the gardener put off having his flues cleaned till it was necessary to use them, and then they took fire. It has even been known to happen that an impatient master, not properly appreciating the value of procrastination, has suddenly dismissed his gardener for no other reason than because his crops were always sown too late. But these are horticultural martyrdoms; and the victims have the comfort and consolation of knowing that they are sufferers in a great cause.

On the other hand, consider the advantages of putting off; consider the saving of time, the pleasure of idleness, the charm of letting things alone; and, above all, the chances that by not doing a thing at once it may not be necessary to do it at all. If things are done the moment they are ordered, a master has no time to reconsider his plans, and a man has no chance of escape from their execution. Thus, the advantages of putting off are by no means confined to the gardener; but his master has equal profit in the system. His master indeed has especial sources of

enjoyment—if he allows his grounds to be overrun with weeds, because he puts off from day to day the orders for their removal, he has at last the satisfaction of seeing two men employed, where one would have been enough, and he has the still higher pleasure of recollecting that he must continue to pay two men instead of one, for many a long week after. To persons of a charitable turn this is peculiarly agreeable; and upon the uncharitable, it is a visitation for which they ought to be grateful.

A great amateur used to boast that he had found the way to keep his "man" on the alert, by always deferring his orders till the time had passed to execute them well. It was true that he never had green peas till they were hawked about the streets, that his cucumbers generally came in in August, and that his celery was no bigger than asparagus, but then he had, as has been just observed, the inestimable comfort of knowing that his "man" was in perpetual waiting, and had no time to waste upon himself. So, in like manner, the descendants of Alexander Morgan, commonly called Slack Sandy, boast, to this day, of the sums he saved the laird of Inchquarity. The laird's garden was in a bad climate, and in sour, soppy land, and when Sandy took to it, he found that fruit was never born there, so he always let alone as long as he could, the pruning, and the tying, and the digging, and the nailing, and training, and draining, "for where's the use," said Sandy, "of taking all that trouble for nothing. We never have had any fruit, and we never shall have any, and to do anything to the trees is nonsense." His arguments and his practice, between them, so convinced the laird that in due time the garden was given up, and Sandy lost his place, but it was always a comfort to him to think upon, how much he had saved his master—and himself.

In short, the advantages of putting off are such as hardly require illustration by argument. It is evident that no mismanagement will be perfect without it; and that the first business of those who desire to shine in so great an art, will be to take every opportunity of putting it conspicuously in practice—the more especially, since it is one of those qualities which are sure to be universally appreciated.—*Gardener's Chronicle.*

LETTER FROM ROCHESTER.

Rochester, Monroe Co., N. Y., }
 April 21, 1851. }

DR. WARDER—DEAR SIR: The subject of the growth of "choice fruits" and "beautiful flowers" has called into existence the Western Review which, with "Downing's Horticulturist," "Hovey's Magazine," and other kindred publications, are exerting a vast influence on the public taste, and creating a determination upon the part of farmers, and denizens of all our cities, towns, and villages, to have their own fruits and flowers grown by themselves.

While we rejoice to know that our sister state of Ohio stands first in the culture of the Grape and Strawberry, we are equally sure that New York can vie with any other in the production of the Peach, Apple, Plum, Cherry, and smaller fruits, and for quality, if not quantity, the Strawberry—the last named, of the Ohio varieties, "Burrs' New Pine" as grown by Mr. M. G. Warner, of this city, can not be excelled any where; while all other varieties attain very high excellence also. Our climate allows the peach, in ordinary seasons, a pre-eminence of flavor over any ever seen by us growing in New Jersey. This may be saying a good deal, but our sojourn in that State in "Peach time," and careful researches in the N. York market, where they abound in the season, confirms us in saying, that so good a peach as the "Early York," "George the Fourth," "Royal Kensington," and "Sweet Water," grown within two miles of Rochester, and in close proximity to Lake Ontario, on the light soil of that region, we have never found any where else. While we can grow peaches so easy, our market is always active in their season, *for supplies* are called for from the Canadas, Buffalo, and as far east of us as Utica; so that for the last few years, they

have commanded from \$1 50 to 3 and \$4, by the basket.

You ask why this is—it is because but few cultivate for market; our *Wheat Growers* can not spend time to do it, and like to till the land better than plant and raise fruit.

Our Horticultural Society, known as the "Genessee Valley," embracing members from fifty miles around us, has had exhibited, superior specimens, at different periods, of all the fruits grown here; strangers have given us the credit for fine displays and extensive varieties.

We hope our Western friends will call always in their season, if they are passing here; now that Cincinnati is within two days or less of us, it is hoped we may know more of each other.

On a recent occasion, I sent Mr. Ernst, the President of your Society, a box of fruit for exhibition, and by a report received, dated April 5th, I discover it was exhibited.

I regret the "Northern Spy" apple was not in good order—I took great pains to have them so. Change of climate, from a cool cellar from which they were taken, has a wonderful effect on fruit, and that will account for the fact that their flavor had become tame. How I wish I could furnish all the members of your Society with some of the fruit, fresh as I have it, so that they could judge better of its merit.

Do send me specimens of "Rawle's Janet," if any one should be coming hither, that would bring them.

I may at some future time give you a detailed account of our best kinds of apples, which are quite numerous.

Truly, JAMES H. WATTS.

✂ Thanks to the proffered hospitalities of Rochester—the citizens of Cincinnati will have too much good taste to refuse the kind invitation, and will be most happy to reciprocate.—ED. REVIEW.

THE CINCINNATI HORTICULTURAL SOCIETY—SPRING EXHIBITION.

.THE terrible frosts which have ushered in this month, have crippled the operations of the gardeners, and cast a shade over the prospects of the fruit growers—still, the meetings of our society have been characterized by a good deal of spirit, and excited some interesting discussions.

The monthly meeting, on the first Saturday of May, was largely attended—members came together to condole with one another, and to compare notes on the sad effects of the frost. The following facts were gathered from the several statements:

Mr. BUCHANAN stated that it was a black frost, penetrating and destructive—all his fruit was killed, even plums, that are so hardy. This is the most severe frost since the 26th of April, 1834, which was also the coldest year. About half the shoots only are left on his grapes, not an apple, peach, or cherry—the strawberries in blossom, half killed, the young shoots of the raspberries very little hurt—even the early rose buds that were promising so finely, are mostly injured.

M. M'WILLIAMS, River road, thought he should have a few apples, pears, and other fruits.

G. SLBATH, on Bold-face hills, reported four-fifths of the grape shoots killed; thermometer 22°.

Dr. SHALER, Newport, reported thermometer 23° at half past six o'clock, and a hard crust on the ground. What tender young fruits can stand that? All killed, of course.

Dr. MOSHER, Latonia, thermometer 24° at sunrise, nearly all the fruit is dead.

F. BALL, Clifton, apples and other fruit all dead so far as examined.

R. SHORMAKER, Vine street Hills, found some grape shoots alive at the tops of the bows; all the lower growth, including the

canes for next year, destroyed—which is a more serious matter than simply losing this year's crop.

It was generally expressed that the dormant buds of the vines would not furnish any new blossoms, sufficient to make up the crop.

N. HASTINGS, Mt. Pleasant, fruit all dead.

F. G. CAREY, Farmers' College, has lost nearly every thing.

S. S. JACKSON, River road, thermometer 20° at sunrise—found ice on the glass of his frames at sunset of May 1st. Much ornamental shrubbery destroyed—roses in bud so injured that many would never open.

M. KELLY, Clifton Nurseries, confirmed this statement, but thought the proximity of the canal had saved his roses to some extent. He also remarked that many indigenous plants and shrubs had suffered more than introduced varieties.

Mr. BUCHANAN stated that certain peach and plum trees, in the city, where they were trained against walls or closely surrounded by them, had escaped, but that the apricots, similarly situated, had lost their fruit.

It was stated that the telegraph had brought accounts of the extensive range of this terrible frost. There is a hope that the fruit buds in our northern borders have been so retarded as to have escaped.

The Spring Exhibition, which had been set for the first week of the month, was postponed; this is always a bad policy, and is calculated to weaken the confidence of the gardeners—if they are taking pains to have their plants grown for exhibition at a certain time, it is a great disappointment to find the period changed—and if they have been so unfortunate as not to have their specimens matured by the period assigned, months beforehand, they at least learn to manage better

next time, for it is not easy always to calculate to a week, upon the forwardness of greenhouse plants; and out of doors, we are always subject to the elements, which are beyond control. Let the Society, in future, consider well the times for the exhibitions, and then rigidly adhere to them, if possible. In this connection, reference should be made to the proposed alteration of the Autumnal Exhibition, from September 24th to October 1st, which was promptly voted down, simply as an expression of a principle, for many of the members wished to attend the State Fair at Columbus, which has been set for the same period we had chosen long before.

FLOWERS have been shown at almost every meeting, some of them very beautiful. Cacti, full bloom, from Jas. Hall; *Tropæolum tricolorum*, *Alonzoa grandiflora*, *Campanula nobilis*, and *Iris*, fine plants, by Wm. Heaver; beautiful *cut flowers* from S. S. Jackson, Roses, Pæonias, Tulips, *Pelargoniums*, *Cinerarias*, Pansies, etc., by various contributors. The first out-door roses appeared on the 17th.

Among the cut flowers, honorable mention should be made of the *Dodecatheon media*, in two varieties, presented by N. Longworth, who found it wild, forty years ago, near Dayton, Ohio, and has nursed and propagated it ever since, showing it annually upon our tables, with the banter to any one to produce a prettier flower, whether native or exotic, hardy or hot-house; no one ventures to take up the glove.

He also exhibited the native Buckeye, (an imported tree,) along with the English Horse Chestnut, in two beautiful varieties.

Wm. Orange exhibited several beautiful wild flowers, which are well worthy of cultivation.

WINE was presented by R. Buchanan, on behalf of Dr. Geo. Engelman, of St. Louis, Mo. "*The Hilgardsberg*," in two samples, and the "*Edw. Haren*," said to have been

made from the Catawba grape, were reported on by the wine committee as being possessed of a *foxy* flavor, which was not accounted for; can it have arisen from a mixture of the grapes?

FRUITS of two years mingled during this month.

APPLES, to show their keeping qualities, were still brought upon the tables—among them, the Bellefleur, Northern Spy, Swaar, Newtown Pippin, Vandervere, Jonathan, Lady, Willow Leaf, Virginia Greening, and some others.

A SOUND PEAR, was shown by M. Mc Williams on the 3d, the variety was not known.

STRAWBERRIES made their appearance first on the 17th, when Iowa, and some others were presented—since which time they have been present at all the meetings. The effects of the frost upon this crop, are manifest in the market; where we have been accustomed to see hundreds of bushels, we now scarcely meet a corresponding number of pecks—and they are not so fine as heretofore, and command much higher rates than at the corresponding dates of previous years.

I am aware that there has been a difference of opinion expressed in the public papers, but speak from observation—and the failure is not merely to be attributed to the direct effect of the frost upon the blossoms, many of which were killed, but, to the continuous cold weather, which kept the insects back, and there is no doubt of the great influence these little things exert; it has been observed in previous years. Where there is a good crop of the strawberry this season, it will be found that the pistillate flowers had set before the frost, and were sheltered by their leaves, or they did not bloom until some days afterward, when the weather became more inviting to insects, or if they bloomed, during the first week of May, that they were in

sheltered situations, where the flies were tempted out. A committee of the society has been directed to investigate the subject and report upon the crop in certain localities, which will present us with useful facts,—their report is looked for with considerable anxiety.

CHERRIES were first presented on the 24th of May—the Mayduke variety, not fully ripe:—at the Spring Exhibition, the following week, they were in fine condition, however, and the Elton and Napoleon also came in.

VEGETABLES should claim more attention from our members, they are substantial benefits. No one can complain of the Asparagus, however, from Messrs. Mottier, Considine, French and others. Peas from N. Longworth appeared on the 17th. Cucumbers, very fine, from Wm. Cox, on the 3d, and by others since.

Victoria Rhubarb has been frequently exhibited.

SPRING EXHIBITION.

THE postponement of the Floral Exhibition, which was set for the first week of May, until the end of the month, was a measure decided upon by the Council, after consultation with the cultivators, as a change that would be advantageous to the majority. All parties could not be suited, and it was, unfortunately, most inopportune for some who had exerted themselves exceedingly to prepare for taking the prizes, and who, at the commencement of the month had plants creditable to themselves and to the society, but who were not able to compete at the later period. To all such, moderation is recommended, in their chagrin, and they are reminded that though we have since thawed out, all of the officers and members were then so frozen up, that the idea of a floral display could hardly have been entertained.

One of the results of the postponement

has necessarily been to concentrate the exhibitions of May with that ordered for the first Saturday in June, and the awards of the committees will be seen to include some of the prizes offered for that day.

The result of the Fair has not been so favorable as might have been anticipated, which was no doubt, partly owing to the weather, and partly to the want of a perfect understanding among the respective officers, as to their several parts in the manufacture of public excitement upon the occasion. It is well known that the people of our city take a deep interest in the welfare of the Society, and are always willing to extend to it their patronage, but at the same time, a capricious public, like a spoiled coquette, sometimes needs to be flattered into an act, even though it be attended with the greatest amount of pleasure to itself. In future let us take care to have no postponements, and to let every body know what and when we intend to exhibit. Notwithstanding all the *contretemps* to which the Society has been subjected, the receipts appear to have been nearly as large as upon previous similar occasions.

The house preparations by the gardeners had been extensive, and no fact will speak more eloquently for the immense value of this Society than the very great improvement in the appearance of the plants exhibited, which has been manifest upon this occasion to all those who have witnessed the earlier efforts of our Society to congregate the inmates of different green-houses within a floral hall for exhibition. This result, to a gardener's eye, is very gratifying—the dirty and forlorn flower-pots have been replaced by newer and more tasteful vessels, and the whole air of the plants is, in a corresponding degree, more noble and attractive. Instead of the long, shanked Pelargoniums of an earlier day, we now have the pleasure of beholding beautifully grown plants, rising from

the very pot, with luxuriant foliage, and crowned with handsome trusses of their magnificent flowers. Nor does this remark apply to the Pelargoniums alone, it is manifest in almost every thing.

Among the novelties was a very beautifully grown plant of the *Torrenia Asiatica*, from S. S. Jackson, trained as a column, and covered with its rich, deep blue flowers: so great had been the skill exercised in its training, that the committee awarded it the premium for the "Best grown plant."

The *Lycopodium cœsius*, trained as a vase, was very much admired, but the shape of the upper part was not quite slender enough: the upper edge or lip, when more fully grown will improve the appearance. One of the smaller plants, of the same species, slightly tied to a slender stick, was very pretty, showing perfectly the natural habit of the plant, which is a great favorite in a stove house.

That new *Lantana*, from W. Heaver, again attracted attention: when shall we ascertain its name? The seedling raised by Mrs. Ewing is even more admired by some connoisseurs. Its color and form are very pretty.

The grafted Pelargoniums, in which very different hues were united upon the same stock, induced some of the casual observers to think that the varieties were not "true, but disposed to sport."

Roses were so much injured by the frost that they were less conspicuous than at some previous exhibitions—still the abundance of beautiful varieties, with other cut flowers, added much to the decorations. As specimens, John Sayers' stand of seventy-three varieties, M'Williams', Carter's, Watson's, and Knott's, were most attractive; and the collection from M. Kelly also embraced many new and beautiful varieties. The plants of Paul Joseph, Charles Souchet, Souvenir de la Malmaison, and the Green rose, from S. S. Jackson and T. Knott, were very pretty.

The Oleander, from John Sayers, was crowned with a gorgeous display of flowers, needing to be sustained by unsightly props. The Verbenas, from S. S. Jackson, were the admiration of all; but those exhibited "in bunches," by W. Heaver, were admitted to be a show fit to be set before a queen, even VICTORIA, and that too by "one who knows." The stand of hardy herbaceous flowers from the same garden, embraced many beautiful things which can not be too highly praised.

The Bouquets, too, exhibit a very great advance in the standard of taste. They are less stiff and formal, more graceful, and decidedly prettier than heretofore: their manufacture is a very nice branch of business, and may be practiced by the nimble fingers, and directed by the fertile fancies of the juniors in the profession, with better results than when executed by the strict and formal rules of art. Those made entirely of wild flowers were unique and quite pretty.

Before leaving this subject of cut flowers, the Society feel bound to express their thanks to the ladies who so kindly rendered their valuable assistance in arranging the decorations of the hall, and in securing the cut flowers—so as to show them to the best advantage. The Mrs. Sleath, Rintz, Carter, Resor, and Heaver, and the young ladies also, whose names are yet to be registered, deserve the more commendation for their tasteful arrangements, because it has not been the policy of the Society to issue especial invitations as in former times.

THE FRUITS exhibited were not very numerous, consisting of strawberries, cherries, and apples—the specimens of Newtown Pippin and Rawle's Janet were remarkably well preserved and retained a good flavor. The Cherries, some of which have escaped the frost, were very attractive. The May Dukes exceedingly tempting, and the Eltons and Napoleons very beautiful. The Fruit com-

mittee, whose report has not yet been received, will no doubt accord to all full justice. Their decisions upon the strawberry questions will be looked for very anxiously by those interested in the cultivation of this delicious fruit. There were not so many competitors for the *display* of strawberries as would naturally be expected in a city where they attract so much attention—the schedule requiring six varieties, it was discovered upon a critical examination by the committee that only two exhibitors had the requisite number.

The great prize of \$100 for a seedling that shall excel Hovey's, may be awarded at this time, if the committee shall agree as to which of the new varieties is entitled to it. To the successful cultivator, this may be a great desideratum—but it may be best for the community of planters, that the committee should be very cautious about committing the Society in the decision. In the mean time the public may rest assured that some of us consider several of the Garden of Eden seedlings superior varieties—Schniecke's Hermaphrodite, do. Pistillate, and M'Avoy's Extra Red, his Nos. 1, 7, or 9, and especially his No. 12.

Ladies who rendered valuable assistance. Mrs. Carter, Miss Jane Carter, Mrs. G. Sleath, and others, are entitled to a vote of thanks from the society, for their attention and kindness.

PLANTS AND FLOWERS EXHIBITED.

WM. HEAVER:—*Green-House Plants.*

10 Pelargoniums; 2 Victory, Miss Percival Alice, Sidonia, Alexandrina, Cumminsville Beauty, Fanny Ellsler, Sylph, Hederifolium, Tom Thumb.
2 *Russelia juncea*, *Hibiscus sinensis*, *Lantana*, Sp. (mut. major), 2 *Begonia parvifolia*, *Abutilon striatum*, *Sollya heterophylla*, 2 *Heliotropium Souvenir de Liege*, 2 do. *Voltaireanum*, 1 do. *intermedium*, Plum-

bago capensis, *Asclepias curasavica*, *Pasiflora cœrulea*, *Stephanotis floribunda*, *Leschenaultia formosa*, *Tweedia cœrulea*, *Justicia carnea*, 2 *Calceolaria meteor*, 2 do. *angustifolia*, 5 do. herbaceous.

Fuchsias.—Magnificent, Coralinna, Lady Milbank, Globosa, Western Bride, Mrs. Hoffner.

Six new *Petunias* in variety.

Cut Flowers.

Verbenas, 24 var.; *Roses*, 12 var.; *Digitalis purpurea* and *alba*, *Glycine frutescens*, *Hemerocallis lutea*, *Pœonia Whitleyi*, fragrans, and *Humei*; *Antirrhinum*, 5 var., *Loasa aurantiaca* vel. *lateritia*, *Cineraria* 3 var., *Solanum jasminoides*.

Mrs. HEAVER—26 round hand bouquets, 2 round bouquets, choice, 20 flat bouquets, 2 large pyramidal, do. 3 large hand bouquets.

Mrs. S. RINTZ—2 baskets cut flowers.

Mrs. G. SLEATH—A profusion of cut flowers, roses, etc., in variety—and evergreens for decorations.

Mrs. R. BUCHANAN—A large basket of cut flowers, choice roses, etc.

Mrs. CARTER—Cut roses, 22 fine varieties, 18 bouquets, and cut flowers.

W. COX—Pansies, 12 pots; and cut flowers, including 50 varieties.

W. ORANGE—2 baskets cut flowers, roses in variety, very fine *Digitalis*, etc., wild flowers; flags in variety, from *La. Heuchera*, etc.

M. McWILLIAMS—12 bouquets, 1 large, do., 1 floral device, 1 plant of *Phacelia* from California.

MISS KATE PETICOLAS—A large bouquet, very fine *Callas*, *Phlox Van Houtii*, etc.

R. B. PRICE—A large pyramid bouquet, roses, pœonias, etc.

M. FRENCH—A large basket of cut flowers.

Mrs. CHILDS, Rose Cottage—Large pyramidal bouquet.

Mrs. BICKHAM—Bouquets, roses, pœonias, sweet Williams, etc.

Mrs. R. NEALE—A large bouquet.

Green-House Plants.

By G. SWANSON, Gardener to Mr. Longworth. 2 *Caladium esculentum*, 1 *Oleander*, 1 *Plumbago capensis*, *Catharanthus albus* or *Vinca alba*, *Inga* (white), *Hibiscus coccinea*, *Musa coccinea*, *Mahernia incisa*,

Phyllaria, Euphorbia splendens, Solanum, Thunbergia, Begonia parvifolia, Bouvardia triphylla, Ruellia, Kennedyya, Gloxinia rubra, 12 Geraniums, Rustic flower basket.

WM. EVANS, Gardener to Wm. Resor, Clifton. 21 Pelargoniums, varieties; 15 varieties Fuchsias, Russelia juncea, Agapanthus umbellatus, Hypericum nepalensis, 3 Calceolaria meteor, 3 do. angustifolia, Begonia hydrocotylifolia, Lycopodium coerulium, Oxalis floribunda, Chcenostoma polyanthus, Eschynanthus parasiticus, Maurandia Barclayana, Heliotropium Voltaireanum, Campanula Lovii, Hoya carnosae, Lantana mutabilis, Lobelia ramosa, Mahernia odorata, Begonia fuchsoides, Lycopodiums, Cereus, etc. Two bouquets, nine inches, pyramidal.

WILLIE and BURNET RESOR—A large stand filled with Fuchsias, and other plants.

MISS SALLIE RESOR—A beautiful basket of flowers, with 7 bouquets of choice flowers.

MRS. W. RESOR—A beautiful vase of Lycopodium cœsium.

S. S. JACKSON. Cycas revoluta, 2 Agapanthus umbellatus, Russelia juncea, do. floribunda, Myrtus communis flor. plen., Heliotropium intermedium, do. Voltaireanum, Abutilon striatum, Techoma jasminoides, Jasminum gracile and floribundum, Hypericum monagynum, 2 Euphorbia splendens, Begonia discolor, do. heracliaefolia, do. parvifolia, Sollya heterophylla, Torrenia asiatica, Ixora coccinea, Serissa foetida, Clematis montana alb. plen., do. Seyboldii, 2 Primula sinensis alba, fl. pl., Leschenaultia formosa, Cuphea platycentra, Viola odorata var. arborea, Oxalis floribunda, Stigmaphyllon ciliatum, Streptocarpus rexia, Calceolaria Smithii, do. angustifolia, Azalea alba, new and fine, Cereus Longworthiana, and Reptans. Chrysanthemum, (in flower), Reseda odorata.

Roses—Bourbons.—Souvenir de la Malmaison, Charles Souchet. —Bengal.—Green Flowered—a great curiosity.

Fuchsias.—Napoleon, Beauty of Salisbury, Princess Alice, Rosea Alba.

Petunias.—Sun-Dial, and 2 Yorkville Beauty.

Verbenas.—Reine du Jour, Susanna, Iphigenia, Magnificent, (Jackson), Celestial, Odorata, Exquisite, Snow Flake, (Jackson), St. Margaret, Marie Louise, No. 11

Seedling, (Jackson), No. 21 do., No. 25 do., No. 18 do., No. 17 do., Harlequin.

Pelargoniums—Display.—Mrs. Clay, Celestial, Sir Harry Smith, Cassandra, Miss Holford, Miss Percival, Sir Walter Raleigh, Mary Queen of Scots, Hebe's Lip, Orion, Acne, Forget-me-not, Constellation, Rosamond, Blood Royal, Belle of Ware.

Ten Pelargoniums—Ytolmschi, Forget-me-not, Pulchellum, Arabian, Duke of Cornwall, Blood Royal, Emperor, Black Dwarf, Queen of the West, Admiration.

Pulchellum, Constellation, Sultana, Mrs. Clay, and Queen of the West, grafted on one plant.

Mrs. Clay, Juliet, Blood Royal, and another, grafted on one plant. Brighton Hero, Tom Thumb, Seedling from above. Lucia rosea, Huntsman, and Brighton Hero, grafted together.

Cut Verbenas, 12 varieties.

H. H. WILLIAMS, Gardener—2 flat hand bouquets—large.

MISSSES JACKSON—4 round hand bouquets 9 inches.

JOHN and ISAAC JACKSON—4 round hand bouquets, made of native flowers, 2 large bouquets, herbaceous plants and roses; 4 pyramidal hand bouquets; 15 hand bouquets.

THOS. KNOTT—7 Pelargoniums, in variety, Paul Joseph Rose, Begonia parvifolia.

Cut Roses.—7 Remontant, 3 Bourbons.

M. S. WADE—3 baskets cut flowers, choice roses, etc.

H. NASH—A large bouquet of roses and other flowers.

MRS. J. BATES, Walnut Hills—4 bouquets.

JNO. SAYERS, Cottage Garden—Pelargoniums, in variety, 2 Russelia juncea, 2 Begonia hyorocotylifolia, 1 Justicia carnea, Euphorbia splendens, 2 Sedum Sieboldii, Pittosporum variegatum, Oleander, Ficus elasticus.

Seventy-three varieties of roses in all the classes; cut flowers, Remontants, Bourbons, Mosses, Hybrid Chinas, Teas, Bengals, etc.

EMMA BROOKS—2 hand bouquets, 2 beautiful round bouquets.

MRS. E. FERGUSON—2 large vase bouquets.

D. MCGABDY, Gardener to R. P. Resor. 15 Pelargoniums; Witch, Lady Napier, Mary of Burgundy, Lord Denman, Fanny Ellsler, Jno. Tyler, 2 Queen of the West, 2 Miss Percival, Alexandrina, Jewess, Sir

John Copely, *Cyrus superba*; 4 *Cinerarias*; *Gloxinia speciosa*, 2 *Calceolaria angustifolia*, *Hypericum monogynum* or *nepalensis*, *Ixora coccinea*, *Mahernia odorata*, *Torreia asiatica*, 6 *Hydrangea hortensis*, small 3 do. large.

Two rich bouquets, and a splendid basket of cut flowers, arranged in pyramid.

P. OUTCALT—A collection of cut flowers, embracing fine roses, etc.

DR. N. B. SHALEB—Cut flowers, of Laffay, La Reine, Marshal Soult, Prince Albert, Yolande d'Arragon, Monstrous Damask, Geo. the Fourth, Queen of the Prairies, Baltimore Belle, Old White, Red Moss; Iris and Lily; *Pæonias*, *fragrans*, *fragrantissima*, *Humei*.

R. M. MOORE—12 bouquets, roses, phloxes, etc.; *Pæonias*, *Humei* rose scented, and *Whitleyi*; a large plant full of bloom.

MRS. CHAS. DYER—Large bouquets, and bunches of grass for decoration.

MRS. EDW. SHREEDER—A collection of cut flowers.

DR. MOSHER—6 bouquets.

GEO. WATSON, Spring Garden Nursery—12 Annuals, in pots; 6 verbenas, and 27 plants miscellaneous; cut flowers in variety, and the following cut roses.

Miscellaneous.—Old White, De Meux, Bella Donna, Centifolia, Provins, Imperial Provins, Officinalis, Damask, Tuscany.

Hybrid China.—Miralba, Watt's Celestial, Bouquet Blanc, George the Fourth, ———?

Remontant.—Laffay, Duchess of Sutherland, Baronne Prevost, La Reine, Laue, Du Roi? and Aricie.

Prairie.—*Ranunculiflora*, (new) Milledgeville Beauty do., Superba, Baltimore Belle, Queen.

Climbers.—Russell's Cottage, Pink, and Boursalt.

Indica.—Eugene Jovin, Bengal Lee.

Noisette.—Noisette Champney, Fellenberg.

Moss.—Luxembourg Moss.

FRUITS.

JAS. NEVILL—*Potentilla repens*.

MRS. S. RINTZ—May Duke Cherries.

M. FRENCH—Strawberries, and fine cherries.

JOHN MCFADDEN, East Walnut Hills—Neck-Pine Strawberries.

P. OUTCALT, Scarlet Oaks—Strawberries, No. 12, Hovey's Seedling, Burr's Mammoth, and Taylor's Seedling.

H. IVES—Strawberries, Neck-Pine, Pistillate Keen, McAvoy's No. 12, Iowa Male, Hautbois.

D. McAVOY—Seedling Strawberries, No. 12, a large basket; said to have been grown in natural soil.

JOHN E. MOTTIER.—Apples—Newtown Pippin, 2 plates, do. Rawle's Janet.

M. S. WADE, Strawberries—Longworth's Hermaphrodite, Schneicke's Pistillate, Hovey's Seedling, McAvoy's Extra Red.

Apples; Swaar sound and fine, Jonathan; two branches Lady Apple in fine state of preservation.

MR. HEAVER—Hovey, Burr's Staminate, Eberlein, and Jenny's Seedling.

WM. STADDEN—Double Sweet Williams, Cactus Speciosissimus.

M. McWILLIAMS, Cherries—May Duke, fine bunches, and Elton.

W. RESOR, Strawberries—Keen's Pistillate, Burr's Seedling, Burr's New-Pine, Burr's Seedling, Taylor's do., Hovey's do., Carter's do., Neck-Pine, McAvoy's No. 9.

VEGETABLES.

WM. RESOR—A basket of Spinach and Salad; 3 Cucumbers.

JOHN MEARS—Potatoes, 2 Plates.

GEO. SWANSON—Benne Bone Lettuce.

JNO. E. MOTTIER—Asparagus, one bunch.

DR. MOSHER—Victoria Rhubarb.

MRS. A. H. EWING—Victoria Rhubarb.

M. S. WADE—12 stalks Rhubarb.

H. B. TURBILL—Extra Early Emperor Peas, half a peck.

M. FRENCH—Asparagus.

JAS. NEVILL—Shaker White potato, large.

GEO. WATSON, Spring Garden—Potatoes. Ash-leaved Kidney, Early Frame, (new); Seedling, third year, (new).

JON. STÆBLER—3 bunches Asparagus.

B. GREENWOOD NEVILL—Half a peck Landreth's Extra Early Peas.

SUNDRIES.

17 year Locusts, by H. IVES. A bottle of Cowslip Wine, from Mrs. G. WATSON.

AWARDS.

Flower Committee's Report.

For the best collection of 20 stove and Green-House Plants, to S. S. JACKSON, the prize,

\$15 00

For the second best, do., to W. Heaver,	\$9 00	<i>Calceolarias herbaceus</i> .—For a display, to W. Heaver, a gratuity,	\$2 00
For a collection of 12 do., N. Longworth,	8 00	<i>Decorations</i> .—Rustic basket of flowers in pots, to Masters Willie and Burnet Resor, gratuity,	1 00
For the best 6 do., to John Sayers,	4 00	For a large basket of cut flowers, to D. McGredy, do.,	2 00
For the second best do., to R. P. Resor,	3 00	<i>Bouquets</i> .—For the best pair large hand, to the Misses Jackson,	3 00
For the best specimen plant, a <i>Torrenia Asiatica</i> , to S. S. Jackson,	2 00	For the second best do., to W. Heaver,	2 00
For a miscellaneous collection of plants, to Geo. Watson, of Spring Garden, a gratuity,	3 00	For the best pair flat do., H. H. Williams, gardener, to S. S. Jackson,	2 00
For a <i>Hydrangea Hortensis</i> , to H. Ives, do.,	1 00	For the best pair indigenous flowers, to John and Isaac Jackson,	3 00
For a plant of <i>Lycopodium Cesium</i> , trained as a vase, to Mrs. W. Resor, do.,	1 00	For pair parlor do., to S. S. Jackson, gratuity,	2 00
For a specimen plant of <i>Pelargonium hederifolium</i> , to W. Heaver, do.,	1 00	For good pair do. do., to W. Heaver, do.,	1 00
<i>Verbenas</i> .—For the best 12 varieties, in pots, to S. S. Jackson, the premium,	4 00	For the best display of bouquets, 20 flat, 24 round, and more supplied, to W. Heaver,	5 00
For the best 24 varieties, cut, to W. Heaver, premium,	2 00	For large bouquet, to Mrs. Neale, gratuity,	1 00
<i>Petunias</i> .—For the best 6 varieties, in pots, to W. Heaver,	2 00	For do. do. to Kate Peticolas, do.,	1 00
<i>Pansies</i> .—For the best 12 varieties, in pots, to W. Cox,	3 00	For display of bouquets, to Mrs. Sleath, do.,	2 00
For the best display, cut flowers, to W. Cox,	3 00	For bouquets, to Mrs. Bickham, do.,	1 00
<i>Fuchsias</i> .—For the best 6 varieties, in pots, to W. Evans, premium,	4 00	For display of cut flowers, roses, etc., to Mrs. and Miss Carter, Kentucky, do.,	2 00
For second best do., to W. Heaver,	3 00	For a beautiful pair hand bouquets, to Miss Emma Brooks, do.,	1 00
For the best 3 varieties, to W. Evans,	2 00	For a pair parlor bouquets, to Mrs. Ferguson, do.,	1 00
<i>Pelargoniums</i> .—For the best 10 varieties, in pots, to W. Heaver,	5 00	For a large bouquet, to R. B. Price, do.,	1 00
For the second best do., to S. S. Jackson,	3 00	<i>Paeonias</i> .—Cut flowers, to Mrs. R. B. Moore, gratuity,	1 00
For the best 5 varieties, to Thomas Knott,	3 00	<i>Herbaceous Plants</i> .—Cut Flowers —For the best display, to W. Heaver,	2 00
For the second best do., to W. Evans,	2 00	<i>Cut Flowers</i> .—Display, to Thomas Knott,	1 00
For the best display do., to S. S. Jackson,	4 00	<i>Roses</i> .—For the best 10 Remontants, to John Sayers,	3 00
For the second best do. do., to D. McGredy, Gardener to R. P. Resor,	3 00	For the second best cut roses, to M. McWilliams. Display,	2 00
For the best specimen do., to W. Evans, Gardener to W. Resor,	1 00	All which is respectfully submitted to the Society.	
For the best Tom Thumb, to Thos. Knott, gratuity,	1 00	JAMES HALL, } Flower Committee.	
For the best Washington, to Wm. Evans, gratuity,	1 00	R. NEALE, }	
		G. SLEATH, }	
		W. COX. }	

Vegetable Committee's Report.

The following were among the articles shown:

Lettuce.—Six heads, by Geo. Swanson, Gardener at Mr. Longworth's; good. Twelve heads, by Wm. Evans, Gardener to Wm. Resor, Clifton, very good.

Cucumbers.—By Wm. Evans, two varieties large and good.

Spinach.—By Wm. Evans, the best half peck, very fine; to this was awarded the premium of \$1.

Asparagus.—By Jno. E. Mottier, 1 bunch very good. By Mr. French, Mt. Auburn, one bunch very good. By Jonathan Stabler, three bunches of 25 each, excellent; to this was awarded the prize of \$2.

Rhubarb.—From Mrs. A. H. Ewing, four stalks of Victoria, very good. From Dr. S. Mosher, Latonia, three stalks Victoria. By M. S. Wade, twelve stalks Victoria, weighing 24 lbs. The longest measured two feet eight inches; width of leaf, two feet six inches;

weight, 2 lbs. 8 oz. This was considered the best, and was awarded the prize of \$2.

Peas.—By H. B. Turrill, one half peck of extra early Emperor, said to be earlier than Prince Albert—very good, fully ripe. By B. Greenwood Nevill, one half peck Landreth's extra early—very good.

Potatoes.—By Geo. Watson, Gardener at Spring Garden Nurseries, one half peck early Frame—a new kind here, very handsome, and of good size for the season. These were the best—prize \$2. A small plate of Ash-leaved Kidney from the same; also a specimen of new purplish tuber white flesh, a seedling of three years, recommended for further trial. By Jno. Mears' gardener, half a peck of potatoes in two varieties, good size; to these, being second best, was awarded the prize of \$1.

JNO. P. FOOTE,

HENRY IVES,

GEO. GRAHAM,

A. WORTHINGTON,

} Committee.

ACKNOWLEDGMENTS.

THE Editor takes this method of expressing his thanks to several kind friends, for their very liberal contributions to his table, parlor, and garden.

The delicious asparagus, in liberal bunches of large stalks, from P. Considine, and from John E. Mottier, were possessed of an excellence of flavor that it is easier to imagine than to define.

The fragrant strawberries, so liberally provided by Henry Ives, Gabriel Sleath, and P. Outcalt, furnished a healing balm to the wounded feeling of self-complacency, which annually reigned in the bosom of the now ex-owner of those strawberry plantations at "Scarlet Oaks," which were the envy of Clifton: may they long continue to reward the care of their present proprietor.

To W. Heaver, S. S. Jackson, John Sayers, A. Pfeiffer, and other friends of Green-House associations, thanks are especially due

for beautiful bouquets, at different periods during the season, which are ever most truly acceptable to the *town-bound* lover of the country.

S. S. Jackson, who has already contributed the material, whence so many of these pages have been filled with useful matter, has now laid the editor under obligations of another order, by his very handsome collection of Prize Verbenas, from the recent exhibition, which shall soon be planted in a rich bed to grow and blossom, and gladden the heart with their smiling and varied faces; among them Susanna, Reine du jour, St. Margaret, Magnificent, Snow Flake, Iphigene, Columbia, Maria Louisa, Harlequin, Exquisite, and Number 11, shall be my favorites.

Many kind friends in the markets have presented specimen apples, which it has afforded me great pleasure to exhibit for them upon the tables of the Horticultural Society.

SEEDS from California have been received from Mr. CHARLES G. ENYART, to whose thoughtfulness we may hope to be indebted for some pretty additions to our stock of plants; this may be guessed from the names, —Tulips, Hyacinths, Star Lily, and Pride of California.

To those who have contributed to the edi-

fication of the readers of the Review, by sending their valuable communications to these pages, an especial vote of thanks should be rendered, which will require another effort. So also with brother editors throughout the country, who have been uniformly complimentary in their notices of this periodical, and its editor.

BUFFALO HORTICULTURAL SOCIETY.—NINETEENTH EXHIBITION.

THE Committee on Flowers and Flowering Plants, beg leave to offer the following report:

The month of May with us, in its vernal character, is perhaps the most fickle of the triad.

The sweet southwest among the early flowers,
Whispers the coming of delightful hours,

is too often succeeded by,

—Cold's the blast,
And wintry is the wind,
O'er full with sleet and snow.

The Executive Committee had hoped for the present Exhibition, that there might be a display particularly of bulbous flowers, and in appointing the day, felt sanguine of its meeting general convenience. But, alas! for all prophetic lore! the fates were all against us. Tulips, which two weeks since promised an abundant and early bloom, took a stand, moved not, and coolly looked on our disappointment without blush or color. Hyacinths have done better, notwithstanding the chilly nights and windy days, they have bloomed and passed away. Depending beyond the power of postponement upon the chances which came not. Our exhibition has been the most meager by far of our May shows, and were it not for the fine collections of green house plants brought out by our enterprising florists, it would have been dull indeed. Yet, notwithstanding, the members and committee of arrangements did their utmost, and deserve a vote of thanks for so neat a display from so little material. It was, perhaps, fortunate that the executive committee acceded to the desire, upon the part of many persons, that an exhibition of poultry, under

its auspices might be holden at the same time. These were placed in the neat coops around the garden. What with the earnest debates on the merits of this or that particular breed, and the continual crowing of Chanticleer, the void in our floral display seemed nearly to be forgotten.

June it is that garlands us with flowers. When every garden teems with floral gifts, when roses, peonies, azaleas, syringas, and the multitude of exquisite pencillings and forms so charm the eye and lure the senses to reflection and contemplation of nature's richest gifts. To June, then, must we look to make up for the deficiencies of the present month.

The following premiums were awarded:

POT PLANTS.

First premium to John Westphal. Diploma. He contributing 52 plants, consisting of choice roses, among which were Solfaterre, Chromatella, Paul Joseph, Henry Plantier, Hymenea, Archduke Charles, Gloire de Rosame, Phœnix, etc.; Calolarias, 3 varieties; Petunias, Mimulus, a splendid Orange tree in full fruit, etc.

Mrs. Lewis Eaton, contributed nearly 20 choice and well grown plants, among which were Roses, Chromatella, Madame Bosanquet, Cels, Hermosa, Camellia, Frank of Urtensis, Pittosporum, Calycanthus, Euonymus variegata, Calla ethiopica, Laurustinus, Arbutus, etc.

Chas. Faude contributed 37 plants, among which were fine Roses, seedling Geraniums, Tree Myrtle, Fuchsia, Cactus, etc.

Elihu Tyler contributed 22 plants, among which were 16 varieties of splendid Gerani-

ums, seedling Geraniums, Amaryllis, Petunias, etc.

Mrs. Dr. Winne a splendid *Pittosporum*.

BOUQUETS.

First premium to B. Hodge, for a beautiful round bouquet, composed of choice Roses, Hyacinths, Tulips, and flowers in variety very tastefully made up.

Mrs. John Westphal, a very tasteful small bouquet, composed of Greenhouse flowers in variety.

Mrs. Lewis Eaton, 3 beautiful bouquets of choice of flowers, also a pan of Pansies, very fine.

Mrs. Chas. Taintor, 2 bouquets.

Misses Bird, cut flowers.

Miss Maria Hodge, 2 bouquets.

Miss Fanny Hodge, 2 do.

Mrs. H. Pratt, 1 do.

Lyman Hodge, wild flowers in great variety.

Miss Cogswell, 1 bouquet.

Mrs. John Hollister, 2 bouquets.

Mrs. J. G. Masten, 1 bouquet.

Miss Lucy Bryant, a very tastefully worked wreath.

A. Bryant & Son, a Tulip bouquet.

For the Committee,

WM. R. COPPOCK.

JAS. W. BROWN.

The Committee on Vegetables, report that the contributions in this class were—

From Lewis Eaton, Asparagus.

Chas. Taintor, Asparagus, Rhubarb, Victoria, and Hodge's Seedling.

Mrs. H. Pratt, Asparagus.

Jno. R. Prince, Asparagus.

A. Bryant & Son, Asparagus, Rhubarb, Victoria, Tobolsk, and Undulata.

Chas. Faude, 8 Tomato plants in pots.

The Committee sincerely regret that no more articles were shown in this class, although the specimens were of the finest quality. The Asparagus in particular has been excelled at no previous exhibition.

The contributions of Messrs. Bryant unfortunately arrived after the premiums were awarded.

The Committee award—

For the best Asparagus, to John

R. Prince, \$2 00

do do Rhubarb (Victoria) C. \$2 00

Taintor,

For the Committee,

JASON SEXTON, Ch'n.

Benj. Hodge presented Northern Spy Apples in fine condition; the only fruit shown.

The next monthly meeting of the Society will be held on the 4th of June, at the residence of the President, at 5 o'clock, P. M.

B. HODGE, President.

JNO. B. EATON, Sec'y.

ALTON HORTICULTURAL SOCIETY.

WELCOME to the junior is hereby tendered by an older association. The springing up of new societies all around us, to foster the growth of plants and fruits and flowers, with the refined taste and higher civilization consequent upon their culture, is looked upon as one of the legitimate results which the founders of the earlier association had a right to expect, and they are now delighted to witness the fruition of their anticipations. Welcome again, say they, to their juniors—and let us exchange civilities, and especially supply the results of your action. The Prairie Farmer furnishes the data herewith presented:

A Horticultural Society has been organ-

ized at Alton with the following list of officers:

President—DAVID BAKER.

Vice Presidents—G. W. Long, Lyman Trumbull, and Charles Howard.

Treasurer—Eben. March.

Recording Secretary—Geo. S. Brown.

Corresponding Secretaries—E. S. Hall, Amos Hillard,

Council—R. K. Heart, N. G. Edwards, B. F. Long, and Edward Keating.

Committee on Fruit and Flowers—Rev. S. Y. M'Masters, Norton Johnson, Samuel G. Starr, E. D. Lopping, and James Chalmers.

Committee on Ornamental Trees—James Bailhache, J. W. Schwappe, B. L. Dorsay, Robert Smith, and John Atwood.

THE FRONTISPIECE.

THE engraving of the Frontispiece, which appears in the present number, does not do justice to the original, which has been erected of sun-dried brick, at that lovely site, "Linnwood." Robert Love is the architect, and the correct and systematic proportions of the exterior, together with the very happy effect produced by the fine combination of the Italian and old English styles of architecture, do great credit to the designer, and are certainly worthy of notice for suburban residences. But the exterior is by no means the ultimatum of this house; we must explore its recesses to appreciate it. The interior was planned entirely by the proprietor, Mr. Chapman, with an eye to combine the greatest possible amount of comfort and convenience to the family, within a building forty feet front, by thirty-eight feet deep, and a kitchen in the rear.

Having passed the veranda, we enter the hall, and on either hand find large folding doors; to the right, opening into the sitting-room, nineteen feet by thirteen feet; to the left, into the parlor, of same size, with the addition of the Bay window; these rooms, together with the hall, can be thrown into a fine *suite*, and be entirely separated from the rest of the house by a door at the rear of the hall. Beyond this door is the dining-room, with the stairway on the right, and in the rear of all is the kitchen, communicating by a door—and also by a double doored closet, or dumb-waiter, for the purpose of passing the dishes without exposing the kitchen to view, or receiving the savory smell of cooking viands; to the right of the dining-room we pass under the stair-landing out of doors, or into the office, or library, which also communicates with the bath room between it and the sitting-room.

Ascending to the second floor, we find on the left a large cistern containing over one

hundred barrels of water—supported by a heavy stone wall running from the cellar—which supplies the bath room below, and the six good sized and well aired chambers on this floor—which are furnished with permanent wash-stands, basin, cocks, and drain-pipes running perpendicularly down to a large drain in the cellar—which carries this water off a side hill in the rear of the house. There are four large chambers in the attic, with a prospectum on the top of the building.

From the landing on the stairway, we can pass down a back stairs into the kitchen, or through the second story of the kitchen into the second story of the privy by a covered passage four feet long, and adjoining which comes the wood-shed and smoke-house.

Being so much pleased with the house, the cellar was nearly forgot; it should not be overlooked, as it contains three large rooms about nineteen feet square, which will answer the purpose of vegetable, wine, and lumber rooms, together with the buttery, or milk room, and a meat room—being perfectly dark and well ventilated by a wire door and a ventilating flue, running to the top of the chimney shafts; also, a hot air chamber and furnace, for regulating the temperature of the house in cold weather.

The wood-work on the outside of this cottage is yellow pine and oak oiled, and the interior throughout the entire lower story is oak varnished, showing the natural grain of our native timber.

In all its appointments, I must express my conviction that I have rarely seen a building of more picturesque and beautiful appearance—or one more perfect and complete in its arrangements than "Linnwood Cottage." In the May Number the beauty of the views obtained, and the varied scenery enjoyed at "Linnwood," were freely descanted upon,

and therefore I merely add in this, that the greatest pleasure may be experienced in viewing in all their pristine grandeur, some of the finest specimens of those venerable giants of the forest, the oak, the elm, and beech—some of which are said to be twenty-five or thirty feet in circumference at the surface of the ground.

SUMMER ON THE LAKE SHORE.

IN the April number of your interesting Journal, was an article on "SUMMER RESORTS." It was well enough so far as it went, but you will permit me to ask, Why you should restrain your good citizens in their summer migrations to the sub-tropical regions south of the National Road.

A two-fold object induces your population to change their locality during hot weather—**HEALTH and COMFORT.** The places affording these in the greatest abundance, and at the cheapest rate, will doubtless command their attention.

Allow me, Dear Sir, to scheme a little for you and them. By a ten hour's ride between breakfast and supper, attended with little more cost and fatigue than the hire of a carriage and a trip to Walnut Hills, or Mount Auburn, they can place themselves in a climate where no sweeping epidemic ever prevailed—and so pure, invigorating, and healthful, that medication of all sorts and kinds—Allopathy, Hydropathy, and Homœopathy, and all other *pathies*, are soon banished from remembrance. The immediate shore of Lake Erie in this vicinity furnishes such a climate, and all that can be required on the score of health. From Cleveland nine miles west, to the residence of Gov. Wood, the bank of the Lake consists of shale and sand-stone, and rises almost perpendicularly from seventy to eighty feet above the surface of the water. It is diversified with points and coves, many of which are now accessible, and others could be rendered so, at a trifling expense.

On the elevated plateau thus formed, the exhausting and debilitating heat of your Cincinnati summer, is never felt. Though the thermometer should rise to 80° or 90° of Fahrenheit, the air is always mild, moist, and pleasant, and the enfeebled Southerner in the hottest days, can here inflate his lungs without a voluntary effort. His nervous, muscular, and mental systems at once feel the impression, and are enabled to act with increased power. Here your fond mothers could nestle their young circle in health and quietness, exempt from the dangers of disease incidental to city life during summer.

This would be combining the advantages of health and comfort, but there are other items to be taken into the account on the score of the latter.

The eye was never yet tired of the views this scene affords. This mighty Lake never presents an uniformity of appearance for two hours in succession; ever varying, ever interesting. In a calm it is serene and beautiful, in a storm majestic and sublime. Commerce, with her thousand sails, gives it new and pleasing features.

Italy, with its boasted skies, can not excel the view of a summer sunset on Lake Erie. Here the sheet of water extends beyond the scope of vision. During warm weather, rapid evaporations charge the incumbent atmosphere with vapor, which, with the surface of the lake, affords a medium for refraction and reflection. As the sun approaches the west, it sends to the eye softened, gorgeous, and golden tints, that no pencil can imitate; and

at length it dips below the waves, leaving behind it for an hour the most brilliant radiations. Such a view I have never elsewhere seen.

The sportsman could here amuse himself by angling in the lake, which affords abundance of the finny tribes; the epicure could feast upon them at his tables; the Horticulturist could cultivate upon his premises all the choicest kinds of fruits and flowers, without any interruptions from vernal or from autumnal frosts.

A fine plank road runs parallel to the lake shore, by which an easy and ready thoroughfare is at all times furnished into Cleveland. From thence steamboats and railroads will convey you with rapid facility to all points of the compass.

Such a Summer Retreat could be purchased and fitted up for a few hundred dollars. To the citizens of other more southern cities, the subject is worthy of consideration.

J. P. KIRTLAND.

Cleveland, O.

TO CORRESPONDENTS.

OUR excellent friend, Dr. J. P. KIRTLAND, who speaks in so laudatory a manner of the beauties of "the Lake Shore," owns so beautiful a place there, that we need not be surprised at his preference for it, even to our beautiful hills.

FROM a neighbor of his, F. R. ELLIOTT, a polite invitation has just been received, suggesting the propriety of studying the Cherry in that favored lake region. *Accepted.*

THERE are some valuable communications

in the drawer, received too late for insertion in this number, and crowded out by the Reports of the Horticultural Societies. This will be a disappointment to the writers, but but it is a very comfortable state of things to the Editor, to have "more copy" than is absolutely needed, — especially on the approach of hot weather.

It is hoped, however, that none of the valued contributors to these pages will be discouraged. Send on your papers.

THE GRAPE VINTAGE.

Mr. Editor: — There is, I believe, an error in the report of the Wine committee of our Horticultural society, on Saturday last. They speak of the grape crop as almost a total failure. As far as I have heard from the vineyards, (of my own I have not inquired,) not more than half of the eyes were killed. If this be true, to many of our vineyards, (if the fall is favorable,) it will be a gain. Our vine-dressers generally leave too much bearing wood, and if all the eyes bear fruit, a desire for a large crop prevents their thinning out the bunches, and the result generally is, the fruit is small and ripens badly.

I last fall saw a vineyard three miles below the city on a side hill, fully exposed to the south, that had not a ripe bunch in the vineyard, when others were gathering their grapes, from their leaving too much bearing wood, and too large a crop of fruit. But had all the first shoots been killed, the dormant eyes will generally produce from one-third to one-half of a crop. An important inquiry is, can not our grapes be saved if we have a late severe frost? In France, the vine-dresser, when a severe frost is expected, has some fuel ready in his vineyard, and the next morning at four o'clock sets it on fire in

such locations that the wind will carry the smoke over the vines. He keeps an abundance of smoke by throwing green grass and weeds on the fire, and this smoke is kept up till the sun is for an hour or two, or more, over the vineyard. This is said to preserve the fruit. I recollect that Mrs. Griffith, of New Jersey, saved her crop of peaches and other fruits by this method a few years since, and sold her fruit at three prices, the fruit in

that region being all destroyed. I believe we shall have at most of our vineyards a fair vintage, if we escape the rot and our fall be favorable. For the dormant shoots that will now grow, where the first shoots were killed by the frost, may not ripen well if the weather in the fall is not favorable. The fruit on these new shoots is occasionally destroyed by an early crop.

N. LONGWORTH.

CINCINNATI, May 12, 1851.

PARTIAL GROWTH.—FORCING.

The following remarks in reply to a correspondent, exhibit the advantages of applied science—it is slightly changed to avoid the introduction of a cut, but is believed to be sufficiently clear without the illustration.—[Ed.]

The occurrence of a local leafing, where a part of a plant is exposed to a high temperature, while all the rest of it is in a low temperature, is familiar to gardeners. If you leave the branch of a vine out of doors, while the other branches are warmed in a forcing house, the latter will be in leaf and flower before the former moves; or if there is a warm passage through which the branch of a vine is made to pass in the winter, the roots and branches being otherwise unprotected, the branch in the warm passage will be in leaf and flower before the other parts move.

The reason is, that in trees, each bud grows by itself and for itself, possessing independent vitality, and feeding upon what the branch contains as long as there is any thing in the branch capable of being consumed, that is to say as long as the internal circulation of the remainder of the tree can replace what disappears where the parts are growing.

If some buds are heated and stimulated into growth, by any local action, they will feed upon the matter included in the branch, and as that matter disappears, its place will gradually be taken by similar matter, supplied by other parts of the branch. When that supply ceases these buds perish, but not till then. In the case of our correspondent these

buds were warmed by the chimney against which they grew.

One of the commonest accidents in forcing belongs to this class of facts. A gardener forces his vines early, they grow vigorously, and promise an abundant crop, suddenly the bunches "shank off." In such a case the roots are in a very low, while the branches are in a very high temperature, and the action is of this nature. The branches grow fast in the damp warm air of the forcing house, and as long as they contain the food which the young leaves and fruit require, all goes well; but at last they are exhausted, and the roots, surrounded by cold wet earth, torpid and powerless, are unable to replace, or replace very improperly, what the branches have lost. The supply of food is thus cut off, and the branches are literally starved, but if the roots are warmed, they pour upward the food they contain, continually imbibe more from the earth, and thus maintain the branch in health and vigor.

If all gardeners would, as many do, always look for these analogies, and trace them to their first cause, they would find themselves wonderfully relieved from the embarrassments into which they are thrown by the sudden occurrence of an event which they might have foreknown must occur.

DR. LINDLEY.

Gard. Chron.

Diameter of Flower Pots.

FLOWER pots 2 to 2½ inches; sixties, 3 inches; forties, 4½ inches; thirty-twos, 6 inches; twenty-fours, 8 inches; sixteens, 9½ inches; twelves, 11 inches; sixes 13 inches; fours, 15 inches; twos, 18 inches.—*Glenny.*

METEOROLOGICAL TABLE.

CINCINNATI, MAY, 1851.

THERMOMETER			WEATHER.			RAIN.	WIND, ETC.,
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.		
1	42	48	clear	clear	clear		Brisk Westerly; high N W; calm at night.
2	32	57	do	do	do		Light W and S W. Ice—fruit mostly killed.
3	50	67	cloudy	variable	cloudy		Do S E; calm; calm.
4	47	53	rain	rain	do	.15	Do E's and N's.
5	38	60	clear	clear	clear		Calm; light N and N W; calm at night.
6	39	66	do	do	do		Do do N; calm.
7	42	75	do	do	do		Do do N; do
8	53	76	variable	do	do		Do calm; light S W.
9	55	85	clear	do	do		Do light S and S W.
10	62	88	do	do	do		Light S; brisk S W.
11	68	91	do	do	do		Calm; light S W; brisk S W; sun 122 deg.
12	70	90	do	variable	do		Do do S W; calm at night.
13	70	85	do	rain, hail	cloudy	1.15	Do light N W; high W and N W; squally, thunder.
14	58	76	do	clear	clear		Light N W and N E; calm at night.
15	55	79	do	do	do		Do E.
16	65	90	do	do	cl' r rain	.70	Calm; brisk S; rain; squally, and thunder at night.
17	67	80	cloudy	variable	rain	1.25	Do light S; do do do
18	65	76	rain	cloudy	clear	.05	Do light S; calm. Strawberries.
19	64	87	clear	clear	variable		Light E; light S; light S W.
20	74	82	do	do	clear		Do S W and W.
21	61	81	variable	variable	cloudy		Calm; light S E.
22	74	90	clear	clear	clear		Light S; brisk S; high S.
23	61	70	do	do	cloudy		Do W; brisk N W.
24	48	73	do	do	clear		Do E; calm at eve. Cherries.
25	58	84	variable	do	do		Calm; very light S E; calm.
26	65	86	var, rain	do	do	.05	Do light S; thunder.
27	70	92	clear	do	do		Light S; light S W calm at eve.
28	75	91	do	cl' rain	do	.10	Do S W; light S; thunder.
29	70	84	var rain,	clear	cloudy	.25	Do E; light S; brisk W; calm.
30	68	81	cloudy	variable	clear		Do N E; light N W.
31	67	84	variable	clear	do		Do E; variable; light breezes.

Total rain, inches

3.70

EXPLANATORY.—Calm means when a flag hangs to a staff; Winds classified according to force, into light breezes, brisk breezes, high wind, storm.

Mean temperature of the month.....	68.76
Do do May 1850.....	61.34
Do do do 1849.....	65.74
Do do do 1848.....	68.55
Do do do 1847.....	64.26
Do do do 1846.....	69.48
Do do do 1845.....	63.23
Mean temp. for May for the above 7 years.....	65.90
Clear days in the month.....	14
Variable (cloudy at times).....	16
Cloudy (sun not visible).....	1

31

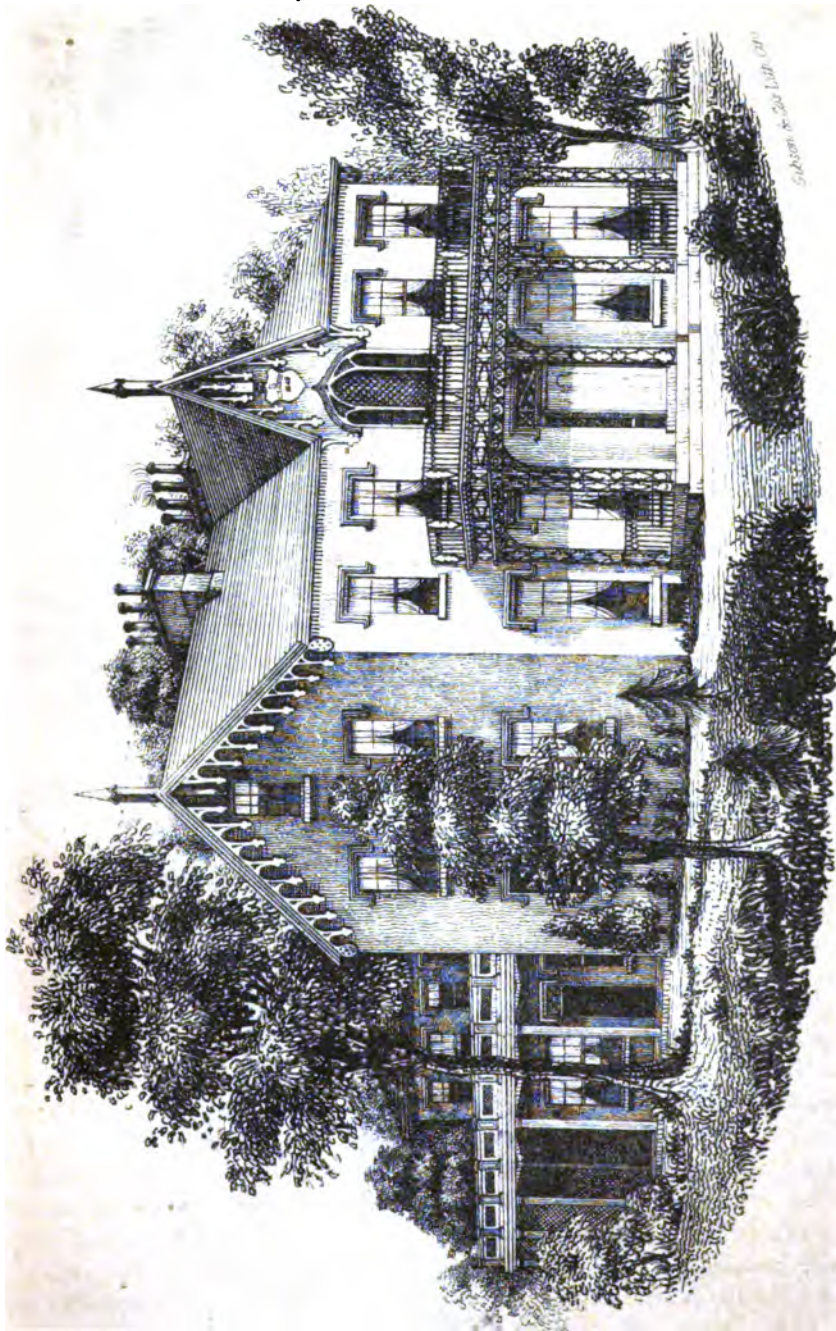
Highest temperature in the month, 27th.....	92°
Lowest do do do 2d.....	32°
Range.....	60°

OBSERVATIONS.—This month is remarkable for the extreme of temperature—ranging from 32 to 92 deg.; frequently touching 90 and 91 deg., and in the vicinity of the city fell down to 24 deg., causing great destruction of vegetation—yet the mean temperature of the month is about 3 deg., above the usual average.

Some squalls occurred in this month, the most notable of which on the 13th, and lasted some fifteen or twenty minutes, attended with hail of unusual size.

JOHN LEA.

UNIT 11
THE FUTURE



SAM CLOON'S RESIDENCE.
2 miles from Cincinnati on the Reading Pike



VOL. I.

JULY, 1851.

No. 10.

THE EFFECTS OF THE FROST. PROSPECTS OF FRUIT.

THE characters of the past spring and winter have been somewhat peculiar; and as they must exert a marked influence upon the crops of fruit in some portions of our country, they are worthy of being recorded for future reference. It was the intention of the Editor to have enlarged upon this topic in the previous number, but the press of matter and multiplied engagements, required a postponement of it until the present time.

The winter was not remarkable for extreme cold nor abundant rains, but for that much more agreeable, though far rarer hyemal visitant—*sunshine*; which prevailed in an unusual degree, to the great delight of all greenhouse operators, among whom it was constantly remarked, that they had rarely enjoyed so favorable a season for their plants, on account of the abundant and propitious sunlight.

The cold was seldom very severe, and the delicate test, the peach-buds, did not suffer materially from this source, as is too often the case, but the trees were in good season clothed with a full garniture of their lovely blossoms, giving promise of a plentiful harvest, to reward the labors of the sanguine orchardists. During March and April, the various fruits had nearly all given their blos-

soms to the winds, and had set an ample share of fruit; though the weather became very dry and cold during the latter month and thus exceedingly unfavorable to the development of the germs. We all flattered ourselves that we should have an opportunity of testing the truth or falsity of the dogmas that had been propounded, respecting the great problems of "budded trees and seedlings," "long petals and short petals," beside the pleasure of watching the development of the fruit upon the trees we had been nursing for so many years, and which were then so full of the promise that should reward us for previous labors, and prove themselves to be *true* or *false* to the grand names by which we had been introduced to them, by their labels or "cards."

Alas for the uncertainty of Pomological prospects! who can tell what reverses are in store for us in the coming hour? After the forward promise of March, and the dry and cool air of the Moderator, April, which seemed destined to temper the earlier ardor of the season, when all nature is bursting into life in very ecstasy at the escape from Winter's icy fetters—then are we visited with a cruel and a killing frost, upon the lovely "lap of May." Alas for that May-day, so

cold and stormy! the very sunshine was cold and wintry, and the northern blast felt as if it had not stopped to warm its breath since leaving Lake of the Woods or Keoonah Point. Before sunset ice was formed, and the morning of the second of May was ushered in with gloom, from its sad effects upon all vegetable life—such a disaster as we have seldom been obliged to witness.

The inevitable consequence of this, was an almost entire destruction of the fine fruit prospects, upon which we had so fondly built anticipations of summer joys. The results of this frost are not everywhere equally disastrous. Thanks to a kind Providence, there are in many positions modifying causes, which afford immunity. These should be a matter of study and close observation by horticulturists; it is to be hoped that the present opportunity will have been embraced by them, to obtain much valuable information upon these points, so that in future plantings, others may take advantage of the information they have obtained. Artificial means of protection may have been applied by some with success—fires, smoke, and moisture, have all been recommended, also hoods for dwarf trees—if any persons have succeeded with any of these means, they are invited to give the results to the public; for, though we may not again have such a disaster for many years, it will be well for some of us to be provided against it in future.

The effects of elevation in modifying temperature, have already been recorded in the valuable "Fruit Report of Kentucky," published on page 190, and other instances of corroborative testimony have been elsewhere rendered: let us endeavor to add to our stock of knowledge, by collecting more observations bearing upon the subject. In this investigation, it will very soon become apparent that the testimony rendered is of a contradictory kind, or at least, apparently

so; for questions of this sort should never be decided by a partial exposition of facts, when a little further investigation will perhaps give us contradictory evidence of equal weight. We must patiently investigate and carefully collect observations whence to generalize, only after a thorough sifting of the results.

It has been advanced with great truth, that elevated positions are most likely to escape from the injurious effects of frost; but there are exceptions to this proposition: these, however, are more specious than real; for we shall find upon a minute examination, that the injury is always most severe in the depressions of an elevated plateau. Thus, not to multiply examples, in the neighborhood of Cheviot in this county, within the space of a mile along the turnpike road which follows the windings of an elevated ridge, the locust tree, (*Robinia pseudo-cassia*), which is a very delicate thermometer, gives us contrary results; in one place on the 10th of May, it was in blossom; in another it was entirely divested of its foliage, and in another the leaves were safe at an elevation of 20 to 25 feet from the surface of the ground. A close observation detected slight basins or depressions, in which the frost had been most severe. Beyond Cheviot in the slight depression occupied by a little stream, the operation of the frost was most disastrous, even upon the foliage of the forest trees, and scarcely a leaf of the grape vines was left; whereas, a mile further off, along the same ridge, on ground only a little higher, the grapes had scarcely a leaf injured, and the cherries are bearing a pretty fair crop. Now in all this region there is not a sufficient difference in the soil, to account for the facts by a difference of *radiation*—but admitting this to be the true and chief cause of the cooling process, which few will deny, the cooler air being heavier, will naturally

flow to the lowest depressions, and there accumulate, if not disturbed by winds.

From the same causes, the high ground at Farmer's College, and the elevated ridge at Mount Auburn, seem to have had a partial escape. So with the neighborhood of Warsaw, in this county, in which situations the cherries escaped to a certain extent. Other places which appeared to be equally well located for the escape of the cold air by gravity, suffered much, and have no fruit.

Now let us look at another class of facts, which have an equal amount of truth to support them:—Most of the orchards along the river, on low grounds, have had their crops destroyed entirely. In any common frost, the moisture from the river, with its latent heat, that is set free by the condensation of the vapor, keeps up an equilibrium that balances the cold produced by greater radiation from the black and loose soils of the bottom lands, and the influx of heavy cold air from the hills also. Besides this, the vapor sometimes amounts to a *fog*, and thus obstructs the radiation from the surface beneath it; and more than this, envelops vegetation in the morning, protecting it from the influence of the *sun*, which is beginning to be esteemed almost the greater enemy, when following a frost. But this year there was no fog to save the plants, and the river bottoms generally suffered as much as any other low valleys, which are commonly obnoxious to frosts.

There are, however, some wonderful exceptions to this. The orchard of Mr. McWilliams, at the base of a high hill, from which the cold might have been expected to have descended, has wonderfully escaped, so that he will have a partial crop of several kinds of fruits—even those which are considered tender. Why should his next lower neighbor, Mr. Hatch, be less fortunate? Similarly situated in almost every respect, he

has not a remnant of an equally promising crop. A ravine descends from the hills, which would furnish a natural outlet for the cold air, and pour it across his place with freezing effects, and thus diminish the chances of loss for his neighbors; indeed, the next place below him, has a fine supply of cherries.

A kind friend at my elbow reminds me of the importance of studying the influence of moisture upon the vegetation in connection with frosts. It will be recollected that the month of April was very dry; and the keen winds of May-day must have blown off any remnant of humidity that lingered in the atmosphere—so that it may be assumed that the air was unusually dry at the period in question. Indeed, Dr. Chas. H. Raymond assures me that he discovered a remarkable dryness in the atmosphere about that time, while making some hygrometric observations with that pioneer in Western scientific investigations, Daniel Drake, who, though older in years than our city, and pursuing many other laborious investigations, is still one of the most energetic students of all that appertains to the physical conditions of our climate and situation; the reader is referred to his Medical Topography of the Great Interior Valley, for some of his results.

The effect of the frost upon the strawberry crop in this neighborhood, involves some other speculations and observations, and has furnished the theme for a communication which will be found in another page of this number. The signature of "*Duster*," will at once show the reader that the writer is one who has great faith in the necessity for some agents beside the wind to convey the pollen to the stigmas of the strawberry, as well as some other plants, more distinctly dioecian. The communication, however, will speak for itself—it is practical, and based upon figures. Look to it for the statement of the result of the *strawberry crop*.

The prospects of the fruit crop are exceedingly poor, and may be summed up in a few words. Of strawberries, we have not had one-third of a crop; of Cherries, only a few samples from favored situations; of Raspberries, we have not even a fair promise; of Peaches, we shall have none, or a few specimens only; of Plums, Pears, Quinces, etc., almost none; of Apples—excepting a few sorts that bloomed late—none; the Vintage will be much smaller than usual.

This state of things, except, perhaps, some favored localities, extends throughout southern Ohio, Indiana, Illinois, Missouri, and Kentucky. From Tennessee and western Pennsylvania, there is no intelligence. Fortunately for us, the *conveniences* of civilization have kept up with the *wants* of civilization, and we are in daily communication with regions that were more favorably situated to

escape the cold. The whole Lake Shore is subjected to a modifying influence from the water, which has a two-fold effect: first retarding vegetation, and then protecting it. Dr. Kirtland informed me, that at sunset, on the evening of May first, when ice was forming here, his thermometer, near Cleveland, rose several degrees. Dr. Kennicott writes, that near Chicago, the cold wet weather of April had so retarded vegetation, that the buds, wrapped in their winter garments, escaped unhurt by the May frosts. Thus we may again congratulate ourselves, and indulge a patriotic sentiment in contemplating our glorious and extended UNION—long may it continue a UNIT! that we, its people, from whatever state or parallel of latitude, North or South, East or West, may have a common interest in the good fortune of the rest of our compatriots.

The Chrysanthemum—A Spring Flowering Plant.

THE following plan was practiced by me in 1836 and 1837, and on the 10th of May, 1837, I gained the Banksian Medal at Cheswick, for a Chrysanthemum having sixty blossoms on it all open at the same time. The sort was the Paper-White, and it was perhaps the only Chrysanthemum ever seen in flower at so late a period. In the month of April, I took as many suckers as were wanted, and planted them out in well prepared ground about two feet apart. As soon as they began to grow I topped them, and continued to do so with each succeeding growth, until the plants became shrubby—in which condition they needed no stakes. If a succession of plants was wanted to blossom late, or in the commencement of the next year, I kept topping a few for the purpose; and in dry weather I watered them with weak manure-water. I potted my plants on the first of September, in eight or ten inch pots, and started them by putting them into a close house, or pit, for seven or eight days, until they had made young roots, excluding all direct rays of sunshine, and syringing them twice a day. My Chrysanthem-

ums that year were very fine; plants in front of a conservatory had scarcely lost a leaf on the 5th of December, and about forty of them had not opened all their flowers; several of those that did not show bloom were put into the stove, and one of them gained the Banksian medal in question. What was done then may be effected now, and during the season of growth, the stem can be made to grow either long or short at the pleasure of the cultivator. I see no reason why a Chrysanthemum should be trained up to a stick, with half the stem naked, detracting from the beauty of the plant. Great improvement has been made in the blooms, but none in the training,—while, by proper management, a long succession of these beautiful winter flowers may be obtained.

JAMES CUTHILL

Gard. Chron.

A somewhat similar treatment enabled one of our gardeners to bloom a Park's Yellow, as late as the 10th of April, in the year 1848. Mr. Jackson also exhibited a beautiful variety at the recent spring show.—[Ed.]

MY FLOWERS.

How perseveringly the trumpet honeysuckle blooms, even at this late season! In spite of frosts and withering winds, I find its scarlet blossoms still bright and gay; and it is now the only flower left in my cold northern garden to "fraternize," as our neighbors say, with one lingering wall flower. My honeysuckle, however, is not favorably placed. It ought to be trained against a wall or trellis; but as I possess nothing of that kind to support a creeper, I have twined it round a larch pole, and it does not do well. The aspect, too, is against it; it is exposed to the keen north-east, and the tips of its shoots are black and withered in consequence. Still it blooms cheerfully on, making the best of its situation, like a wise and thankful spirit, reminding us, by its silent example, that when the state of life to which we are called does not exactly suit our tastes and feelings, we should still, with cheerful submission to the Hand that nurtures us, enjoy the good, and turn to the best account the disagreeables of this passing world.

The beauty of the trumpet honeysuckle consists in the shape and colors of the flowers, for it is scentless, its stems long, bare, and straggling, and its foliage by no means rich. Against a wall it blossoms freely, and this is its proper situation. I always cast an envious glance upon one that decorates a cottage near which I often pass, and I am told that branches of its flowers are continually given to those who stop to admire it; so that it is useful as well as beautiful, and enables a kindly heart to enjoy the pleasure of *giving*, when it has nothing else to bestow. It is delightful to see the ready kindness with which the cottager gathers her finest flowers for the passers by, who pause to admire them; and her little child will, following her example, run to its atom of a border, and bring a double daisy, or a marygold, to add to the simple present. In how many ways, in what little things the disposition shows itself? A benevolent heart is true politeness. I have known, and heard of persons, who can take their friends through hot-houses, darkened with clustering grapes, yet never offer to pluck one bunch. Of how much pleasure do persons such as these deprive themselves? Our gardens might be allowed to exercise

those feelings of benevolence that can not, perhaps, expand in any other way; and where we do possess the abundance of this world, it adds intensely to their value, when we give to those who need. A lady—the dear and valued friend of a member of my family—devoted the rich contents of her grapery to the sick and poor.

The common honeysuckle—one of the sweetest flowers we possess—should be much encouraged. The plant thrives either as a climber, or as a bush, and in each form it is delightful. It is very subject to a gummy sort of blight, like honey dew, which makes it unpleasant to the touch, and ruins its beauty for the season; and I have heard ladies complain that their honeysuckles were never free from it. Now, I have in my garden two young hollies, which have been for many years covered with a redundant mass of honeysuckles, looking, in fact, like honeysuckle trees; and I have also a hedge of the same lovely plant on one side of my garden; yet I have never known them to be affected with this blight. I attribute this healthy state to their being shaded almost entirely from the sun, except in the light of summer. They grow almost beneath the boughs of fir-trees, yet they flourish and bloom more richly than those in sunny situations; and, therefore, from my own experience, I recommend ladies to alter the situation of those plants that suffer from this disease, and place them in colder stations. Their shoots should be cut off constantly, to prevent their rambling, and becoming weak; and by keeping them back in this manner they thicken in their growth, the flowers are larger, and more abundant, and their effect, in the blooming season consequently increased. The perfume is delicious particularly when the dew falls; and for the period of a month or rather more, they are in full beauty. I do not think anything can exceed the loveliness of their rich, waving wreaths of golden blossoms, except their aromatic fragrance. Roses even, do not scent the air like honeysuckles; and I have stood beneath their boughs in the cool of the evening, and almost fancied myself in "the balmy East."

There is a late flowering variety which blooms after the others have departed; the

flowers are even richer in size and color but they are not so sweet. With a little management, we may obtain a succession of these ornamental creepers. They should be placed in every vacant spot, round every tree, and against every wall and fence. No bower is complete without them, and every porch should be clothed with them. Cuttings root well from October to March. Take the strongest of the last year's shoots, and divide them into cuttings eight to fifteen inches long; place them in a shady border, about a foot asunder, and plant each cutting two-thirds of its length beneath the soil. By the next autumn or winter they will be ready for transplanting. They will increase also by layers, made in autumn, winter, or spring. They must be the previous summer's shoots, and their tops should be nipped off when laid in the ground. They will also be rooted by the following autumn, and should then be taken off and planted elsewhere. I recommend every lady and every cottager to cultivate these sweet flowers abundantly, for they will flourish anywhere—in shady places, and under trees, where little else will grow; and they need little culture, except to shorten the luxuriant shoots, and keep them in order. The cottage garden is usually surrounded by a hedge, frequently neglected, or merely

clipped coarsely, to prevent its growing thin. It is too often an unsightly kind of boundary, when it might be one of great natural beauty, both in the garden and the road. Plant a few honeysuckles here and there; some of the wild graceful clematis also, and the appearance will change completely; in the spring it will glow with spicy blossoms, and through much of the summer too, and in the autumn be mantled with soft, feathery flowers, twining themselves round every bush and bough. I have seen the rugged banks and hedges covered with this elegant wild climber; and nothing can be prettier. How graciously does the hand of God adorn and beautify this ball of earth for man's enjoyment! The very lanes are gardens in themselves, and tell of that boundless love that gratifies every sense He gives his creatures. What language there is in every leaf, and flower, and moss! Even the bramble, with its graceful sprays, and grape-like clusters, speaks to the passer-by; so does the thorn. They bid him to look to the fruit he bears: "For every tree that beareth not good fruit, shall be hewn down, and cast into the fire." A solemn, salutary truth is this to the careless mind. If we will "hearken," we may learn much in a morning walk!—*Cottage Gardener*, Nov. 1848.

THE ART OF MAKING CUTTINGS.

THE art of striking plants from cuttings is one which mainly depends for success upon preserving the vital fluids from evaporation, until the germ or bud from which a new plant is to spring can become sufficiently organized to maintain an independent life, separate from the branch that bore it. For this reason, we find universally in practice, the employment of hand-glasses, or bell-glasses, the effect of which is to retain, in a state of uniform moisture, the air which surrounds the cuttings; because evaporation can not go on to an injurious extent, in an atmosphere itself charged with vapor.

Every one who has attempted to propagate plants by cuttings, has, however, found certain practical difficulties in his way. He would easily succeed with *Pelargoniums*, and *Fuchsias*, and *China Roses*; but when he attempted to deal with *Apples* or *Pears* in

the same manner, he will probably have failed. Among the methods invented from time to time to overcome such difficulties, and to which we need not refer on the present occasion, is one by Prof. Delacroix, of Besançon, which appears to deserve attention, both for its novelty and ingenuity.

This gentleman states that he, some years since, conceived the idea of insuring the success of cuttings, by putting the lower end in water, and the middle in earth, a circular incision being made between the earth and the water. This was not attended with all the advantages he expected, but it led to the discovery of the following plan, which he designates a simple, economical, and certain mode of propagation. His process is described in the following words:

"My cutting is placed entirely under ground, so as to form a subterranean curve,

of which the convexity is uppermost, the very middle of the curve being on a level with the surface of the soil. At this middle point there must be a good eye, or a small shoot. In this way the whole length of the cutting is protected by earth, and the smaller end, instead of becoming the seat of dryness, which is always more or less injurious, becomes a passage for absorption. The bud, which, under these circumstances, is the only part exposed to the air, bears, without injury, or rather with advantage, all the causes of excitement.

"Although I did not commence my experiments before the end of June, I have seen quite enough to satisfy me that the method may be of serious advantage.

"Two drills about three inches apart were drawn parallel with each other, in a kitchen

garden of indifferent quality, situated on a calcareous plain near Besançon. A hundred cuttings of Apples, Pears, Plums, Apricots, Tulip trees, Roses, etc., almost all of this year's wood, were bent and buried in the manner described, with their ends in the two drills. They were watered a few times, and at this moment every cutting, in the open air, and exposed to the full sunbath, is just as fresh as it was when planted. In most of them, the part exposed to the air (the bud) is the seat of active vegetation, especially in the Pears and Tulip-trees, the buds of which have already made some progress."

This idea seems to be a very good one, and its adoption can hardly fail to increase the chances of successful propagation.

[*Gardeners' Chronicle.*

[Some bury the whole cutting.—Ed.]

A CHAPTER ON APPLES.

THE readers of the Review will value the communications which follow, because they are from practical men, in whose judgment they may place entire confidence. Jas. H. Watts has been a large dealer in fruits for many years, and is thoroughly acquainted with the products of the orchard in his neighborhood.

H. P. Byram has introduced many fine fruits into Kentucky, and has given notoriety to some of our best western apples; his efforts in this article, and others which he furnishes to the Louisville Journal, are directed to the introduction of food for stock, an application of pomology that is destined to attract much greater attention in the west than heretofore.

The list furnished by R. Avery to the Prairie Farmer, enables us to ascertain the opinions of a practical fruit-grower in a very different region, and we are thus prepared to compare the views of those widely separated. Friend Avery had a peculiar scale by which he grades the quality and profits of fruits:

In the first column representing quality,

he has from 1st to 6th, in which latter category he certainly places two of the meanest apples that ever appeared in good society; and in the second, indicating the profits to be expected, he descends from 1st to 14th, and in the lowest place is Pryor's red—below even the miserable Pennock! how is this—will the people buy them in preference to our favorite keeper?—*de gustibus non.* Ed.

WESTERN New York produces apples in great abundance—its soil and climate seem exactly adapted, and as the trees are not old they are generally healthy, vigorous, and productive. Pruning is too often neglected, and cultivators do not in all cases deserve as much for it as they get, for the neglect of the trees.

A vast quantity of apples is furnished for the New York and New England markets, as ours are, very fair, and generally free from worms. I propose to give a list of those which are plenty here, and are considered market fruit, and also those cultivated for home supply. The public taste for fine

fruits in this neighborhood, has made Rochester renowned for choice apples; after the "Harvest" variety with which we first regale ourselves, and which has the peculiar freshness of a new apple, we have the

"Early Strawberry,"	Ripe in August,
"Early Joe,"	Late " "
"Red Astrachan,"	" " "
"Summer Rose,"	" " "

either of which, and all first rate; the Astrachan grows to good size, and is a beautiful fruit.

Ripening in September, and in eating through October, the "Hawley" or "Dowel" stands unrivaled. It grows to a good size, and yellow colored when ripe, very tender, fragrant and juicy. The "Autumn Strawberry" ripe at the same period as the Hawley, is a favorite—and ranking high is the "St. Lawrence," introduced here from Canada a singularly striped apple with flesh of pure white, and as delicate in flavor as can be imagined, very juicy and tender, is ripe in October.

The "Dyer" or "Pomme Royal," sometimes from being so good a fruit called Victuals and drink, is superior here, as is the "Lowel" or butter apple, which possesses a fine flavor. The "Porter" flourishes well, and the "Fall Pippin" can not be excelled for the table. The "Alexander" ripening in October and November, is a fine fruit, and completes our catalogue of early or autumn apples. We can luxuriate while the above named last, and a better list can not be had in their season.

Under the head of early winter, the "Fameuse" is the very best apple, being high flavored, beautiful in coloring, sometimes striped, with a snow white flesh, and very juicy; it was brought from Canada, and is one of the best—ripe from November to December. "Norton's Melon," sometimes called Water melon, is another of the first

class of fruit, it grows a beautiful apple being highly colored and highly flavored subacid, and peculiarly mild—it has no superior,—ripe from October to January.

The "Jonathan" is a grand variety, not equally well known as yet as the others mentioned—it is red in color, and very good,—November to February. "Peck's Pleasant" is a fine apple, and keeps well, is very fresh when ripe, from December to February.

"Herefordshire Pearmain" is one which can not be too highly valued, is a medium sized apple, generally colored red, and on the shaded side has a yellow tinge, which is often beautiful, is high flavored, and very juicy, ripe from December to January.

The Yellow Belle Fleur grows finely with us, and we admire it when fully ripe; its acid taste is extremely palatable, and it is fine for cooking.

"Hubbardston Nonsuch" we barely know, its eastern repute has induced its growth with us.

The "Canada Red," strictly a desert apple, has many admirers, and is one of the choicest—it is of but recent introduction, is a handsome apple, and is a favorite with the ladies for its mildness, keeps well, generally ripe from December to April.—[Can this be our Ox-eye, or Newtown Spitzenburgh? Ed.]

"Vandervere" is much admired, and grows very fair, ripe October to January.

"Wagener," a prize seedling variety, not generally introduced, and as yet very scarce; a good apple, but we esteem several as better. "Northern Spy," a long keeper, high flavored, very juicy, and beautiful when grown under a full sun, ripe from January to July.

"Pomme Grise," a small russet apple, but of very fine flavor, and keeps well. "Rambo," there can be no better apple than it is. A juicy spicy fruit, and fit for all occasions of a social character.

The Baldwin.
Esopus Spitzenburgh.
Rhode Island Greening.
Roxbury Russet.
Twenty Ounce.
Pearmain.
Seek-no-further,

and Swaar, constitute the varieties generally sent to market—a large revenue to the country is produced from their sale, even at the low price of a dollar per barrel.

Our crop bids fair for this season, and as there is likely to be a scarcity east and west of us, a quick market is anticipated.

Truly, J. H. WATTS.

N. B.—I ought to have mentioned our sweet apples; The "Talman Sweeting" is no one for cooking; "Green Sweeting" fine for desert; "Bailey Sweeting" a large handsome red fruit, and delicious; and "Munson Sweeting" new and very good. J. H. W.

APPLES AS FOOD FOR ANIMALS.

There are few products of the farm more profitable as food for stock than apples, and from a well-selected list a complete supply may be had from July to February.

It has been found that hogs fed with a portion of apples daily with grain, fatten much more kindly than those fed on grain alone.

Many of the eastern farmers fatten their pork exclusively on apples cooked and mixed with oat, pea, or corn meal. They are found equally valuable as food for cattle, their health and appetite being much improved by a small daily allowance of them.

At the request of several of our enterprising farmers, we publish below a list of such apples as flourish best in our climate, furnished us by two intelligent fruit growers of Ohio. Some of the kinds mentioned may only be known by local names, and not found in the books. A selection of a dozen of the kinds named for the different seasons will be found sufficient for this purpose:

White—June.
Early Bough—August.
Golden Sweeting—September.
Jersey Sweeting—September to October.
Pumpkin Russet—through the fall.
Lyman's Pumpkin Sweet—October to November.
Ramsdell's Red Pumpkin Sweet—fall and winter.
Summer Sweet Paradise—August and September.
New England Pumpkin Sweeting—August and September.
Sweet Russet—fall and winter.
Broadwell—fall and winter.
Danvers Winter Sweeting—
Grafton Sweeting—October to January.
Canfield—winter.
Horton's Sweet—winter.
Pryor's Red—winter.
Rawle's Janet—winter.

H. P. BYRAM.

A LIST OF FRUIT TREES.

MESSENGERS. EDITORS: You requested me to give you my views of some of the different kinds of apples that have in past years proved themselves with us, I therefore send you the following comparative list of a part of what we have tested from three to ten years, on high, dry, rich prairie.

	Quality.	Profit.
Belmont, very productive,	1 to 2	1 to 2
Carolina Red June, regular bearer every year for 10 years,	2	1
Carolina Sweet June, bears every year,	1	3
Early Harvest,	2	4 to 5
Esopus Spitzenburgh,	1	5 to 6
Fall Pippin,	1 to 2	6 to 8
Fall Wine,	1 to 2	2 to 3
Gilpin or Small Romanite, heavy bearer,	4	1 to 2
Golden Russet, trees tender,	1	4
Kirkbridge White, very productive,		2 to 3
Maiden's Blush,	2 to 3	2
Newark Pippin, heavy bearer,	1 to 2	1 to 2
Newtown Pippin,	1 to 2	7 to 9

Newtown Spitzenburgh,	1 to 2	2
Pennoek,	4 to 6	10 to 12
Priestly,	2 to 3	2
Pryor's Red,	1 to 2	12 to 14
Rambo, bears regularly for		
7 years,	2	1
Rawle's Janet,	2	1
Rhode Island Greening,	2 to 3	4
Roman Stem, best early		
winter,	1	2
Summer Queen,	2 to 3	6 to 7
Sweet Romanite, bears		
regularly 7 years,	1 to 2	1
Vandervere Pippin,	6	2
White Winter Pearmain,	1	1 to 2
White Belle Fleur,	2 to 3	1 to 2
Wine Sap, never fails to		
bear,	2	1
Yellow Belle Fleur,	2 to 3	1 to 2

As to the profit of fruit there is something more to be considered than productiveness; as, for instance, the Sweet June is No. 1 for quality, and it produces as well as the Red June No. 2 for quality; yet one tree of the

latter is worth three of the former on account of durability; the fruit of the first will not last after it is ripe more than two days, but the other will last ten or twelve days. In making out this list, other people's taste has not been consulted. I can not taste for others, nor they for me. If others think that I have not classed them as they should be, let them make out a list agreeable to what they think is best. If others think that one Rambo or Rawle's Janet tree is not worth 12 to 14 of Pryor's Red, or 7 to 9 Newtown Pippin trees, then let them say how they would compare them; but if we do not learn the location, it will be of no advantage to us. On other exposures, or other soils, or in other climates, the fruit may be very different. When the trees have a greater age the comparative value of the trees may be different. How can we reason but from what we know?

R. AVERY.

SCIENCE IN AGRICULTURE AND HORTICULTURE.

Why will not our gardeners also learn from the wise men of our land? all have discovered, that notwithstanding the great outlay annually made in the purchase of stable manures, it too frequently happens that the land "gets tired" of certain crops that have been perseveringly sown upon some particular spot. Ascertain what element this crop has been constantly abstracting from the soil, and return it to compensate for the constant drain.—Ed.

A specimen of soil, of remarkable sterility but of good appearance, was given to Sir Humphrey Davy. On analysing it he found sulphate of iron. He recommended a top dressing of lime; and the sulphate of iron was forthwith converted into the sulphate of lime; a noxious substance was at once changed into an element of fertility. It was the boast of Franklin that he had stripped the lightnings of its perils and had chained

the thunderbolt. Chemistry does more.—Poisons are changed by its alchemy into the means of subsistence.

The Hon. Reverdy Johnson purchased, in 1849, a small farm, near Baltimore, in the last stage of impoverishment. Such was its reduced condition, that the last crop of corn was not more than one peck to the acre. He states that all the vegetable matter growing on the two hundred acres of cleared land, including briars, sassafras, and other bushes, if carefully collected, would not have been sufficient for the manufacture of one four horse wagon-load of manure. He applied to Dr. David Stewart, of Baltimore, an able chemist, who rode out to the farm and procured specimens of the soil, which he carefully analyzed. He found that it contained an abundance of lime, potash, magnesia, iron and organic matter, duly mixed with alumina and sand. One element only of a fertile soil was wanting, phosphoric acid; and of this there was no trace. He recommended an application to the soil of the biphosphate of

lime, a preparation of bones, as the best mode of supplying the deficient element.—The remedy was given at the expense of ten dollars per acre. It was the one thing needful. Health was restored to the exhausted patient, and the grateful soil yielded last year twenty-nine bushels of wheat per acre. Nothing else was applied, indeed nothing else was wanting. Here was a beautiful triumph of science. There is no doubt about the facts; the experiment came under our observation and attracted the attention of hundreds. It was detailed to the writer by Mr. Johnson himself, and various others worthy of perfect reliance. It has been made known to the country in the *American Farmer*.

In each of these cases, a mere practical farmer would have groped his way in the dark, ready to be led astray by any ignis fatuus, in his efforts to find some means of improvement. He might have applied lime or stable manure. The first would have been worthless, if not injurious, and the second would have given no results commensurate with the expense. The same is probably true of guano, for though the best specimens contain as much as twenty-two per cent. of phosphate, yet the expenditure would have been out of proportion to the result, if enough had been applied to give a sufficiency of the phosphoric acid.—*American Farmer*.

MITCHAM.

Chamomiles.

AT MITCHAM two kinds of double chamomiles are distinguished, one yielding the ordinary yellowish oil, the other, which is called a new sort, a blue oil. The samples of each kind, which have been furnished us by Mr. Arthur of Mitcham, by whom they are cultivated, are not distinguishable, except from a slight difference in the leaf, which in the new sort is more developed. The oil is generally distilled from the entire plant, not from the flowers only, as directed in the pharmacopœia. By keeping, this blue oil changes its color, and becomes the usual yellowish, or brownish color. The flowers which yield it, although fine in appearance when fresh, are liable to change color by keeping. They are therefore less adapted for sale in the market than they are for distillation.

Cultivation—Stephenson says that "The soil best adapted for chamomile is a dry sandy loam; the sets are planted about nine inches from each other, in beds of four feet wide, with alleys of eighteen inches between them. The culture is very similar to that of peppermint; viz., constant attention to weeding, principally with the hand; the digging of the intervals at the beginning of winter, and covering the exposed and loose roots of the plants with fresh mold."

Mr. Arthur informs us that chamomiles may be cultivated from seed, which plan is adopted for the introduction of a fresh variety from another locality, or by way of occasion-

ally renewing the stock. But the plan commercially pursued, is that of dividing the roots, each root forming the rudiments of three or four dozen plants. Mr. Arthur plants them in rows a yard apart, with an interval of eighteen inches between the plants. If planted closer, the space is not sufficient for gathering the crops without treading on the plants. At the close of the season, a sufficient number of plants are preserved to furnish the roots for the ensuing season, and the remainder are destroyed.

March is the best month for planting, but they are sometimes planted in April, and occasionally in the Autumn.

The crop is in perfection about July, and continues to yield more or less until September, and sometimes as late as October. The period, however, varies according to the season.

Either extreme of wet or dry weather is injurious to chamomiles. A soaking shower about once a week, with intervals of sunshine is the most favorable weather.

Mr. Arthur says that chamomiles are most productive when grown in a heavy soil. A stiffish black loam suits them better than a light sandy soil, which latter causes them to become weak, or than clay which is too heavy. They are benefited by changing the ground every two or three years. They require but little manure. If over manured, they run to stem and leaf, and the crop of flowers is less abundant.

When gathered, the flowers are placed on canvas trays in a drying closet, warmed by means of a cockle. They remain there about a day, which time is generally found sufficient.

The average crop per acre is six cwt., but the range is from three to ten cwt. The single flowers are by weight more productive than the double; but the price being lower, the value of the crop is about the same. The flowers supplied to the English market are grown chiefly at Mitcham, and in Derbyshire. Both kinds are of good quality, but we think a preference is generally given to Mitcham flowers. The gathering costs from three farthings to one penny per pound. The cost of gathering and drying chamomiles is about 42s. per cwt.

The London market is chiefly supplied with chamomiles from Mitcham.

Aconite or Monk's-Hood.

We find that three sorts of aconite or monk's-hood are cultivated at Mitcham; but on the 3rd of September (1850) only one sort (termed giant monk's-hood) was in flower.

1. The usual sort cultivated is called common monk's-hood, but we were too late to see it. From the description which was given to us of it, we suppose that it is probably *Aconitum Napellus*. We were informed that it is planted in the autumn (October) by dividing or separating the tubers, and the roots may be gathered the following autumn; but it is a better practice to leave them for two years in the ground. When gathered they are washed and dried. This sort of aconite flowers in June. One of the growers informed us that he was in the habit of cutting off the flowers; we suppose for the purpose of promoting the growth of the roots.

2. Mr. Arthur informs us, that the preceding is the only sort of aconite which he cultivates; but that there is a parti-colored sort grown at Mitcham, the roots of which

are sold in the London market. The flowers are white, with a little blue in them. It is a fine tall plant, which like the common aconite, flowers early in the season. We have had no opportunity of seeing this sort.

3. At Mr. Moore's physic grounds we found another sort of aconite in cultivation, under the name of giant monk's-hood, but we were informed that as yet none of it had been taken to market. The specimens which we saw were about five feet high, the inflorescence was a somewhat loose panicle with ascending stiffish branches, the helmet conical, the color of the flowers a paler or brighter blue than that of *A. Napellus*, the staminal filaments hairy, the carpels or young fruits converging.

The last character readily distinguishes it from *A. Napellus*, the carpels or young fruits of which diverge from each other. It appears to be referable to Reichenbach's section *Corythælon*, which is characterized as follows: ("Rad. tuberosa, fol. 5-7 pedata,) perianthio deciduo, fructu juniore nutante, carpidiis apice convergentius." In this section Reichenbach places three species—*A. palmatifidum*, Reichenbach, with smooth filaments; *A. exaltatum*, Bernhadi, with hairy filaments and conical helmet; *A. stœrkianum*, Reichenbach, with hairy filaments and vaulted helmet. From these characters this giant aconite appears to be a *A. exaltatum* of Bernhadi, of which "*A. decorum*" is given by Reichenbach as a synonyme. In confirmation of this statement we find that the giant aconite of Mitcham agrees in every particular which we can discover, with a plant growing in the gardens of the Royal Botanic Society, Regent's Park, and ticketed "*Aconitum decorum*." Reichenbach says, this species flowers in July and August in Germany; we found it in flower and beginning to give fruit, both at Mitcham and at Regent's Park, in the beginning of September.—*London Pharm. Transactions*.

MANNA.

THE Manna Ash, *Fraxinus ornus*, in the manna districts of Capace Cinesi, and Fabarotto, when the last manna is obtained, does not form woods, as is commonly supposed, but is cultivated in separate plantations. These plantations generally present regular

squares, hedged in with *Cactus opuntia*. The trees are planted in rows, and are from two to eight inches in diameter, with stems from ten to twenty-five feet high, which from the first shoot are kept smooth and clean. The soil is carefully loosened and freed from weeds.

After the eighth year the trees yield manna, which they continue to do from ten to twelve years, when they are cut down, and young shoots from the roots trained: one root stalk frequently yields from six to eight new trees and more. For the production of the manna, young and strong shoots are requisite; but they are not topped till the tree ceases to push forth any more leaves, and the sap consequently collects in the stem. This period is recognised by the cultivators from the appearance of the leaves; sometimes it occurs earlier than at others, and the collection of the manna takes place in July or early in August. Close to the soil cross sections are made in the stem, and in the lowermost sections small leaves are inserted, which conduct the sap into a receptacle formed by a cactus leaf. This is the way the manna *in sortie* is obtained. The incisions are repeated daily in dry weather, and the longer they continue the more manna is obtained. The stems are left uninjured on one side, so that

the manna runs down the smooth bark more easily. The next year the uninjured side is cut. The manna *cannelata* is obtained from the upper incisions, more than forty of which may be counted on one tree. The sap there is not so far as below, and consequently dries more easily into tubes and flat pieces. After the manna has been removed from the trees, it has further to be dried upon shelves before being packed in cases. The masses left adhering to the stems after removing the inserted leaves are scraped off, and constitute the Manna *cannelatæ* in fragmentis. *Cannelata*, Can. in fragm. and *Capace* are collected at the same time from one stem, the more *cannelatæ* from the younger, and the more *Capace* or *Gerace* from the older part of of the stem. In Sicily the latter is designated in *sortie*, and is probably the most active.

Dry and warm weather is essentially requisite for a good harvest.

Hooker's Journal of Botany.

"THE NEGLECTED AMERICAN PLANTS."

EVERY American Botanist must feel grateful to the Editors and Correspondents of the Horticulturist and Review, for their patriotic advocacy of our beautiful native plants.

The writer of this, has resided most of his life, on the very borders of civilization and cultivation, and has observed our native species, in all their natural glory, and has seen many of them taught to bow to the genius of culture, and forget the habits of their original savage life.

So far as I have observed, our trees are more easily domesticated, than our herbaceous plants—there is little difficulty however in causing either to flourish, in the lawn or garden, if due attention is paid to their *natural habits* at the time of their first removal from the forest,—and the first consideration is SHADE.

There is generally considerable loss, in removing native trees a long distance, from

the woods to the nursery—though very little in removing them from the nursery to their final destination.

We have found the first difficulty arise, from two causes, principally: first, the selection of large trees, with small roots, and, secondly, those grown in the shade; and it is often very difficult for the nurseryman to procure plenty of trees grown in the light; but the amateur can always get enough for his purpose, on the borders of woodlands, or along the roadside, or river bank; and then he can remove large specimens of trees, with balls of earth and herbaceous plants with the entire sod, or turf, in which he finds them. Nurserymen will always find it much cheaper to collect the seeds of trees, in order to procure a stock; and in planting seeds, they must take a leaf from the book of nature again, if they would avoid failure. Few wild seeds will bear much drying, and many posi-

tively require almost immediate planting, in leaf mold and sand with a little of the shade and "mulching" that nature ordinarily gives them, as protection from winter transitions, and summer scorchings.

We have about forty species of American trees, growing *together*, in the same prairie soil, and all appear well contented; under the shade of these, and a few European species, we have a goodly share of native herbaceous perennials, and now and then, an annual, or biennial—and one of the handsomest of these is the little *COLLINSIA verna*. This plant, like others, seeds itself, but it must have some shade, and be kept clear of grass.

In general, trees and shrubs feel less the loss of their natural soil, and shade, than herbaceous plants, though they may be more sensitive to changes of climate. On the same half acre of dry prairie, I have the former, from the swamps,—the rich deep woods, and clay and sandy barrens. But the plants that naturally consort with these, are not always happy, when I attempt to cultivate them without their natural concomitants: For example: I have found the splendid *CYPRIPEDUM SPECTABILE*, very impatient; and our rich perennial Lupin, has positively refused to bloom, out of its poor dry sand; though both these plants are very abundant in the barrens, quite near me, and often flourish within a few feet of each other, where there happens to be a "slough" beside the sand hill.

Our prairies are very rich in summer and autumnal plants; but the vernal species which we most admire, are principally from the forest, or woodland border. Of these, I may mention, as mostly easy of introduction, and requiring little care—the *Hepatica*, *Claytonia*, *Sanguinaria*, *Anemone*, *Dicentra*, *Erigeranium*, *Pulmonaria*, *Polemonium*, *Phlox*, *Trillium*, *Dodecatheon*, etc., etc.

Except some species of vernal *Phlox*, and

the *Dodecatheon*, these are all out of flower now, (last of May), but a partially shaded border of the *Dodecatheon*, is next to one of *Tulips*—of all shades of color, from pure white, to bright pink rose and purple. I have never seen a scarlet flowered plant, of this genus; though my venerable friend—David Thomas—writes me, that a gentleman of your state informed him, that one had been found in Ohio. This elegant plant will succeed in the open border, but the scape, peduncles, and petals, are shorter and coarser, and the colors less delicate, than when shaded.

In making selections from our native trees, and shrubs, one can not go amiss, as there are very few of them, that do not surpass foreign species, in some particular. But except our most grand and graceful *Maples*, *Elms*, etc., and some small ones, very common, and more beautiful than abundant, like "Red bud," (*Cercis*), *Coffee tree*, *Buckeye*, *Sassafras* and others, I would advise the amateurs to apply to the nurserymen, when convenient.

The indispensable *Magnolias*, and the formal, but most desirable *Liriodendron*, and others, with deep tap roots, may cause disappointment, when taken from the woods, and are, fortunately, very plentiful in the nurseries. The same may be said of all native evergreens.

Of all our American trees, our evergreens have the most cause to complain of the bad taste, and unpardonable neglect of our arboriculturists. We are often as much amused as gratified, by the remarks of some of our visitors, when viewing our collection of American plants. "This is really beautiful—I never saw anything so rich—so delicate—what is it? have you more of it?" and when told it is a common *native*,—they often express more surprise, than patriotic pride, and gratification.

Not long since a gentleman of good taste,

and very fond of plants—and who was brought up in a “hemlock country”—fell into raptures over a small tree, near our door; “Is this the Deodar, Doctor—I never saw it before—how very clean and graceful, and what a perfect wavy pyramid based on earth; do you have it for sale?” Yes, plenty of it; but this the *Abies canadensis*, you have seen it before,—“the *Abies canadensis*,”—what is that? I don’t recollect”—and he plucked some leaves, and tasted them—“can this be the *Hemlock*!” “Ay, ’t is nothing else”—“Wonderful! and I did not know it—all the effects of cultivation, I suppose”—“No; that very plant was taken from the road-side in Erie county, N. York, four years ago, a knife has never touched it, and it has had no cultivation, except to fork up the surface soil, in the fall, and spring, and keep out the grass.”

Your correspondent—my excellent friend Col. Hodge, of Buffalo,—has some remarks on the “Osage Orange” for hedges in the last *Horticulturist*. My friend’s experience in Buffalo, is much like mine, here at the Grove, and yet, I like the conclusions of the Editor, much better than the Colonel’s practical deductions. In our deep rich prairie soil, with clean cultivation, this plant has invariably winter killed here. But the same plants on high dry ground, with little cultivation, have withstood the last two winters. The plants that survived, made shoots of only 2½ or 3 feet—those that perished, made three times

the quantity of wood, and length of shoot—neither were shaded, or cut back.

You are doubtless aware, that in its native region, the *Maclura* is found, like the Crab apple, on all kinds of soil, and is either a tall tree, or a little more than a shrub, according to the quantity of soil, and surrounding shade, and moisture. Now, as I once before observed, the *climate*, of the localities where this plant abounds, is very like that of our North-western states, in everything, except the *intensity* of winter frost. May we not, thereupon, hope to acclimate this plant from seed, even as far north as Chicago. The question will be settled; for my neighbors, Dr. Foster, and partner have procured, I think, 70 bushels of the seed, which they are planting in this northern region.

When our most liberal, and judicious system of Rail Roads, shall have been completed, Illinois will lack nothing but fences, to make her the third agricultural State in the Union. Our original crop of rail timber is being rapidly exhausted—natural decay, and prairie fires, and the rascally old “worm fences,” have destroyed the most of it, about here. Let us hope to find a hedge plant, suitable to our hot and dry climate, and let us try the Osage Orange, a while longer—if that fail, I see nothing for us, but Michigan pine, or Pennsylvania iron.

Your friend,

JOHN A. KENNICOTT.

Northfield Ill., May 31st.

ROSES.

MR. RIVERS' NURSERY, SAWBRIDGEWORTH,

In mentioning some autumnal roses remarkable for their tendency to flower freely, it will be best to furnish the names of those only that are this day (October 22) in full bloom, for owing to the long period of dry weather, only those that are really and truly “perpetual roses,” are now flowering. In

this category the Bourbon roses, with some few exceptions, have the palm, for they are still covered with blossoms and blossom buds. The most conspicuous among them are the following: Du Petit Thouars, this Rose, brilliant in color as the Gloire de Rosamene, with large and very double flowers, has never

ceased to give abundance of blossoms from June to this day, and many young dwarf standards have still from 12 to 20 flowers, and flower buds in every stage of development.

Comice de Seine et Mane, a very pretty cherry colored rose, is also in great beauty. Edouard Desfosses, a rose colored variety, and Emilie Cautier, are also in perfection. George Cuvier and Henri Lecoq, two very fine carmine roses, and Justine, of the same group, as regards color, with large beautifully shaped flowers, are all like rose bushes in June and July, rather than in October. So numerous and brilliant is their appearance. Le Grenadier and Raymond, two splendid crimson roses, and Menoux of a deep carmine, are as prolific in flowers as any of the color; and Madame, Augustine, or Therese Margat—the three are one—a very beautiful rose-colored Bourbon, is most conspicuous in a large bed; for every tree—they are dwarf standards—is a bouquet of flowers. Among the Bourbon roses, with light colored blossoms, none approach Souvenir de la Malmaison, still studded with its large and magnificent flowers; Madame Angelina, although not a very vigorous grower, is still finely in bloom, and the queen of the Bourbons is literally covered with flowers and buds. The

above are not pointed out as novelties, for they are all Bourbon roses of some years' standing, and they are all, what is so desirable in gardening, cheap and good.

The Hybrid Perpetual roses have suffered much by this droughty season; generally they rival the Bourbons, but at this moment there are but few in full beauty. In this select few is Geant des Batailles, still giving abundance of its brilliant glowing flowers, and Duc de Alençon also finely in bloom. Baronne Prevost, with its very large rose colored and Jacques Lafitte, with large and very double flowers, of a deeper rose tint, are both in full beauty; the former always blooms in perfection, the latter only in dry seasons. Cymedor, a charming brilliant crimson rose, is now in a good state; this variety is only beautiful in autumn, for in summer it seems to shrink from the bright glare of the sun. In most seasons there are many other roses of this family in high condition at this season, but not so now; we have therefore thought it better to confine ourselves to those remarkable for having withstood this untoward autumn. The China rose, Mrs. Bosanquet, is most remarkable for its abundant autumnal blooming, and is now covered with its pale, flesh colored, wax-like flowers.

Gard. Chronicle.

PRESERVATIVE OF WOOD.

THE substances most successfully used as preventives of decay, are the salts of mercury, copper and zinc. Bi-chloride of mercury (corrosive sublimate) is the material employed in the Kyanization of timber, the probable mode of action being its combination with the albumen of the wood, to form an insoluble compound insusceptible of spontaneous decomposition, and therefore incapable of exciting fermentation. The antiseptic power of corrosive sublimate may be easily tested by mixing a little of it with flour paste, the decay of, and appearance of fungi on which are quite prevented by it. Next to corrosive sublimate, in antiseptic value, stand the salts of copper and zinc. Chloride of zinc has been patented by Sir W. Burnett for the preservation of wood, sail cloth, etc., and appears to succeed admirably. For use in the preservation of paper, the sulphate of zinc is

better than the chloride, which is to a certain extent deliquescent.

A series of experiments were made in the summer of 1840, on the use of metallic and other solutions for the preservation of wood. A deep saw cut was made all round the circumference of some growing trees near their base, into which the solutions were introduced by forming a basin of clay beneath the cut; thus the solution took the place of the ascending sap, and in periods of time varying from one to three days was found to have impregnated even the topmost leaves of trees fifty feet high. The trees were chiefly beech and larch.

After impregnation, they were felled, and specimens about five feet long by two inches square were cut out, and packed in decaying sawdust in a warm damp cellar, where they were left for seven years. The details of the

experiment are given in a table, by which the following general rules are made to appear: The pieces of wood saturated with sulphate of copper in the proportion of one pound to one of gallon water, or with acetate of copper in the proportion of one pound to one pint of vinegar, and one gallon of water, were found in perfect preservation, clean, dry, and free from fungus; but the remaining pieces which

were saturated with nitrate of soda, prussiate of potash, acetate of iron, sulphate of iron, common salt and kreosote, presented much decay, and a large growth of fungi.

The results obtained from solutions of corrosive sublimate, one-eighteenth of a pound to a gallon of water, (Kyan's proportion) varied in an anomalous manner.—*Chemical Gazette*.

CULTIVATION OF CINNAMON.

THE Island of Ceylon is the great country for Cinnamon. This island is about 9000 miles in circumference, and lies at the entrance of the Bay of Bengal. The first Europeans who settled there were the Portuguese. The Dutch in 1551 took the island from the Portuguese. In 1795 it was conquered by the British, in whose possession it has since remained. The natives are pleased with the government, and there is ample protection for all classes. There is an American Mission Station there, which has had success.

The Cinnamon for which Ceylon has been famous, and which is well known to us all, is the inner bark of the *Laurus Cinnamoma*, a beautiful tree, attaining the size, and something the appearance of a moderately large pear tree. To produce the bark—such as is required for purposes of commerce—the tree must be felled, and the root forced to grow in shoots, straight and smooth. These being cut when eighteen months or two years old, a fresh supply of young sticks rapidly appears after the first rains.

The English Government possess five cinnamon plantations in Ceylon, containing in the aggregate about twelve thousand acres. These have nearly all been sold to private individuals, some of whom allow their estates to be very much neglected; others keep them in a state of high cultivation.

The whole of the Ceylon coast is low and sandy, and generally favorable for the growth of cinnamon, which flourishes in a hot and damp atmosphere, such as is there found.

In former days, the cultivation, as well as the after preparation of the spice was exclusively carried on by one particular caste of Cingalese, called "Chalias," who had headmen, or petty chiefs, of various grades placed

over them, belonging to their own body. This system is now partly changed, and the preparation is alone carried on by the "Chalias." This being their hereditary occupation, they are, as might be expected, very expert in their operations.

The "Chalias" are assembled at break of day in gangs of thirty, with a "Canghan," or native overseer of field work, over each. All are armed with a sharp, light bill hook, and a stout cord to tie up the sticks when cut. The European superintendent, having seen each gang properly equipped, accompanies them to the spot appointed for the day's cutting, to which they march in good order; each party is then placed, and, at a signal from the superintendent, the men, to the number perhaps of two hundred, rush among the bushes with loud shouts and cheers, and the work of destruction commences in good earnest. The peelers are paid according to the quantity of spice they prepare, and it may therefore be imagined how anxious each one is to secure a good bundle of sticks. By ten or eleven o'clock the peelers have cut sufficient cinnamon to occupy them in the barking process for the remainder of the day; and having collected all their sticks in bundles, they proceed to the "peeling house." They seat themselves cross-legged on a rush mat; and with a curiously shaped little knife, strip the tender bark. It is scarcely to be believed how rapidly barking is performed. The little knife is first run down the stick on two opposite sides, from end to end, and then, by inserting the instrument at the thick part, between the bark and the stick, and running it quickly along, with a twisting motion, the long slip of fine bark falls off without a slit or blemish, an object very desirable if the

quality be in other respects fine. When the sticks are all stripped they are of no further use.

On the morning of the second day the wives and children of the peelers flock to the peeling house; and seated in rows, commence scraping off the green cuticle from the heaps of bark slips, which are brought to them by the younger children, who also remove the scraped spice to them. These begin by assorting them into three qualities, according to thinness of bark and brightness of color; the shorter pieces of each kind are set aside, to be placed in the interior of the pipe, while the longest are placed outside. The piping, or quilling, then commences, and by dexterous management, the peeler so selects his bark, that very little cutting at the ends is required to form them into their proper length. The quills are made into uniform lengths of three feet and a half, and three layers of the bark, or quill, inside each other. The greatest vigilance of the superintendent and his native assistants, is needed in this stage of the process; for much of the value of the spice depends upon the proper divisions into

qualities, and, not less, upon the rejection of very coarse pieces; for it is to the interest of the peelers—who are paid by the weight—that as much as possible of the thick be placed in the quills; but the master's interest requires that as little as possible should be so hidden.

The bark having a natural tendency to curl up, requires but little rolling; and when made upon the second day, the pieces are laid out singly upon cords stretched across the upper part of the building. There they remain for two days, when they undergo a little more rolling up, or "handling," and are placed on stands outside, exposed to the action of the hot air, but carefully sheltered by cocoanut leaves from the rays of the sun.

Three or four days of this open air drying will generally suffice. The pipes are then piled upon light stands of wood for a week or two, when they are paid for. Each party of "Chalias" keep their cuttings separate; and a good deal of emulation often rises amongst them as to who shall turn out the greatest quantity of the finest kind, called "first sort."—*English paper.*

THE STRAWBERRY CROP OF 1851.

DURING the month of May, an announcement that we should have a light crop of this fruit, was made in the public papers, by one whose judgment in all that pertains to the Vine and the Strawberry, is of a character that few will question, founded as it is upon the most careful and long-continued observations. An issue was joined by another Horticulturist, who congratulated himself and the public, that he, and perhaps his neighbors, had been more fortunately situated, and that they would realize a full crop of perfect berries, despite the cold and drought which threatened the plants at the time of blossoming. Some interest appears to have been taken in the subject by the several editors, and much more by some of the dear people, so that the question has assumed a degree of importance entitling it to a thorough investi-

gation; and, in the absence of any report from the Committee appointed by the Cincinnati Horticultural Society, I shall endeavor to set forth the results of my own observations, and give them to the readers of the Review for what they are worth; not assuming, however, to place myself upon the same footing, as a scientific horticulturist, with either of the two leaders in this discussion.

The Strawberry Crop, amounting, in some seasons, to thousands of bushels, furnishing to our citizens an abundance of the most healthy and delicious fruit, is an item of no mean importance to our people, and of considerable outlay and proportionate income, to some of the larger cultivators, who plant as much as ten, twenty, and even fifty acres, each, in this fruit. Besides, have not the Horticultural Society given the subject fur-

ther importance by offering a premium of one hundred dollars for a new seedling strawberry, of superior size to any in cultivation in 1847?—which premium has been awarded, this year, to a plant raised by D. McAvoy, at the Garden of Eden,—designated, among many valuable new seedlings examined by the committee, as "*McAvoy's Superior*."

Cincinnati has, so far, taken the lead of the world, in the production of this delicious berry; and we should never forget, while luxuriating upon the fragrant strawberry, that we owe the abundant supply in our markets to the untiring efforts of one man, who has even incurred the opprobrium of being called "Strawberry-mad," in his endeavors to promulgate a knowledge of the peculiarities of the varieties of this plant. His exposition is generally known as the *sexual theory*. So great has been his modesty throughout, and so nice his sense of right, that, although he has been obliged to teach even the wise men of the east a true knowledge of their *own seedlings*,—a hard task it has been with some, who have never yet fully recanted their errors;—and although the "*theory*," wherever known, has been called after his name, still he ever disclaims its originality, and refers to the merest accident, by which it escaped from one member of the family that first practiced it here, for their own private emolument, at a time when they controlled the market, and sold their fruit at fifty cents per quart.

The results of the teachings upon the great "Strawberry Question," have been not only the large crops furnished us for some years, but also, as a reason for these crops, the cultivation, almost exclusively, of the Pistillate varieties, with only enough of the Staminate-flowered kinds, to insure the impregnation of the blossoms. The requisite number of these is a point not yet fully settled; perhaps one healthy staminate plant

will suffice for two hundred of the others: but the experiments in progress to elucidate this point have been again interrupted by the unfavorable character of the weather, keeping back the insects, whose aid is so essential to convey the pollen from flower to flower. It is best, therefore, to have staminate enough.

Both last year, and this, pistillate plants have been observed with imperfectly formed berries, growing within three feet of staminate plants that produced an abundant bloom; and these pistillates, too, were of varieties that are generally remarkable for their perfectly shaped berries. In all these cases, the *flowering*, as well as the *fruiting*, was carefully observed, and the state of the weather was noted; whence it appears, that the cold which prevailed prevented the insects from performing their exceedingly important function. The injury is to be imputed to a want of their services, rather than to the severity of the "frost or drought," injurious as they are: the former absolutely killing the germ, which turns black; the latter cutting off the necessary supplies of nourishment. It may be asserted, without fear of contradiction, that unless the *achenia* be impregnated throughout the berry, the most genial showers and fervid sunshine will never cause the full and perfect development of the *placenta*, that is destined to support and nourish the seeds: without them it is but an imperfect *mole*.

Having premised my philosophy,—if it may be so considered,—let us proceed to an investigation of the facts, or results of the ripening of this fruit. I have seen whole beds, of very healthy plants, abundantly supplied with rows of stamen-bearing kinds, at intervals, among them, in which there were not quarts, where there should have been bushels, of fruit; and among the berries that were to be found, here and there, scarcely one was sufficiently impregnated to render it perfect in shape. In other places, more

favorably situated,—either more sheltered, or in a colder soil, so that the blossoms expanded at a later period, when the weather had become warmer,—the crop was sometimes, apparently, very good; though, even here, there was a large proportion of imperfect berries. This is not mere guess work; but actual observation, in different places, and at different times, enables me to declare, that there were fewer insects hovering about the flowers than usual. I am, therefore, convinced that insect life performs a very important rôle in the fructification of flowers of the diccian class. We know their value, nay, necessity, in the Cucurbitaceæ, where the stamens occupy one flower, and the pistils are found in another. The merest tyro in the practice of *forcing* melons and cucumbers is aware of the necessity of conveying the pollen from one flower to another. In growing the vegetable marrow, (a variety of the gourd, with very curiously formed flowers,) almost every one has been disappointed at the very small proportion of flowers that produce fruit: This is owing to the peculiar shape of the flower, and, probably, to the absence of the particular insect which, in its native haunts, performs the function for this plant; for I am disposed to think that each plant has some one or more insects assigned to it for this purpose. Indeed, so fully is my mind impressed with this dusting idea, that I will hazard the suggestion that most plants require some external stimulus or disturbance to excite the discharge of the pollen, and its absorption by the stigma. Allow me to ask, why so many flowers do not set fruit, especially when shut up in green-houses, away from insects?

To proceed, among a multitude of cultivators who have been consulted,—most of whom gave corroborative testimony,—I shall only adduce the following:

Mr. Allen S. Reeder says:—"I have

raised strawberries for four or five years: this year, I did not have one-third of a crop. They were small and imperfect, owing to the frost, or some other cause, that I can not account for."

Mr. Culbertson, (of the Licking,) the great strawberry grower, gave the following answers to a series of questions which were propounded to him:

1. In a good bearing season, I have brought as many as thirty stands to market in a single day. Each of these contained about seven bushels.

2. Five stands is the greatest number I have brought to market any day this season; though I have planted twice as much ground in strawberries.

3. I have not had one-fifth of the usual crop, this year.

4. A great many of the berries were imperfect, owing to some cause; perhaps the frost or drought.

5. Not more than one in fifteen or twenty of Hovey's Seedlings was perfectly developed. I think this has been caused by the frost and drought.

6. There was not one in thirty of the blossoms produced a *perfect* fruit.

7. There is a sufficient supply of males in the field.

8. I have from forty-five to fifty acres planted in strawberries—nearly twice as much as formerly.

Gabriel Sleath, a very careful cultivator, and shrewd observer,—who is well known for his usual success in producing an abundance of very fine strawberries,—says, he thinks his crop was only *one-sixth* of what it should have been, this year.

It is enough. We all know that the season of strawberries was much shorter than usual. The price was never so high as at the opening of the market: and, though they were sold at the cheap rates for a day or two,

it was manifest that the supply was sadly curtailed, both in quantity and quality. It is unfortunate that no person has taken the account of the quantity actually brought into market this year, as has sometimes been done heretofore.

Excuse this prolixity respecting the shortcomings of my favorite fruit, and allow me to subscribe myself an advocate for the insects and their doings, preferring to let them carry the pollen rather than be myself the

DUSTER.

POMOLOGICAL CONGRESS.

RANDOM THOUGHTS AND OBSERVATIONS ON POMOLOGY, AND KINDRED SUBJECTS, in Illinois, and the West, by JOHN A. KENNICOTT, of the Grove, Northfield, Cook Co., Ill., 1850.

To the President and Members of the American Pomological Congress :

GENTLEMEN:—As little better than a self-constituted "committee of one," I have neither the leisure, subjects before me, nor critical knowledge of fruits sufficient to enable me to produce a creditable, or even another popular report, on the Pomology of Illinois.

But, gentlemen, there are subjects intimately connected with our particular branch of rural art and rural science, upon which I have long and deeply pondered, and that I deem worthy of our consideration, and which may not prove entirely uninteresting, or altogether inappropriate in this connection.

I am bound by promise, and by gratitude for the favor shown a previous paper, to attempt something toward filling the pages of the first volume of our "transactions." Yet, were it not for the example, the self-educated son of a poor farmer might be pardoned for refusing to obtrude his chance thoughts upon men of talent and education. But I am proud of my class, and deem it the duty of every son of the plow, and the budding-knife, who can write, to do his best to arouse and enlighten his brethren, whose destiny and whose blessing is, that in the sweat of their brow they shall eat bread, and to whom the earth shall yield her fruits, as the rewards of toil: and health, and strength, and length of days,—home comforts and pleasures, and cheap luxuries,—shall come with industry and economy; but which will come sooner, and last longer, if a little specific knowledge be added thereto.

I would fain aid better men in spreading this knowledge, broad-cast, over the land. But, in truth, though willing enough, I have taken few notes, have few works for refer-

ence, and have never a solitary hour for abstracted thought. I promise you, however, that I will not travel far "out of the record," or in the least over-step the bounds of that broad field, in which we are all laborers; and from which the farmer draws the rough food and clothing of the million, while we but gratify the refined taste of the few, though we hope to aid in spreading a healthful and delicious "desert" for all; and if we can not cause the peasant to "dine like a prince," we will help him to dine as well; while we try to seat every farmer, (and every mechanic with a rood of ground,) "under the shade of his own vine," and apple tree, and pile his plate, and fill his cup more healthfully, and as abundantly, and with such fruits, and their "pure juice" as few princes can command.

I will, therefore, with your permission, offer, in the first place, a few words on grape culture in Illinois, and the effects of wine-growing on our national habits of intemperance.

And if we *can*, in reality, unite pleasure with profit, and measurably gratify appetite, while, at the same time, we work a great improvement in the general health, and bring certain aid to the cause of National Temperance Reform, by substituting *wine for whisky* as a beverage, we shall accomplish a great thing; though I freely admit, that it were still better *could* we abolish both, instead of substituting the lesser for the greater evil.

"Sweet is the vintage, when the show'ring grapes,
In bacchanal profusion, reel to earth,
Purple and gushing."

Choice fruits, and pure wines, are food and

medicines, and permitted luxuries, that few will be apt to question or decline.

I have lately made a rapid, though extensive, reconnaissance of the valley of the Upper Illinois, its sources and tributaries, and I was really astonished at the great and evident capabilities of this extensive region for the profitable cultivation of the grape, and the probable success in wine-growing, which will follow the general introduction of the vine.

Take Kaskaskia, and the line of our canal from about Joliet, and you will find many "bluffs," or steep river banks, where the lime rock underlies the whole country, and shows itself along the streams. The soil is here deep, fertile, dry and friable; the seamy rock immediately below the surface acts as a most perfect drain, and the southern and south-eastern aspects, afforded by the right bank, are the most glorious exposures for the vine I ever saw.

And then, our climate is, on the whole, very propitious when you get beyond the influence of "our cold lake winds" of spring and early summer. The grape can neither abide "wet feet" nor too much rain; and, fortunately, our summers are generally dry, and our autumns almost always so, and quite hot and protracted withal. In fact, the autumn is ever our most delightful season, at the north, and our enjoyment of it is little marred by sickness, or a great pressure of farm work; we shall, therefore, have plenty of time, and a good season for our vintage, and if we make a good wine, we shall find a good home market, and fair prices, for all the State can produce.

But for a few facts. At Lockport, I have seen the grape doing well with a bad exposure. At Ottawa, I saw it doing admirably on a southern slope: Mr. H. L. Brush, of Ottawa, has quite a vineyard (two acres) of Catawba and Isabella grapes, mostly three years old. In July, his vines were literally loaded with rich clusters of the most perfect fruits. His vines are simply trained to low stakes, and moderately cultivated, with no "summer pruning," so far as I observed.

I may here remark, that Mr. Brush is also paying great attention to the strawberry and the sweet potato; the alluvion at the base of these bluffs being admirable for both crops. In this latter business, Mr. Brush has one worthy competitor near by, Mr. Jacob Smith,

of Lockport, who has, for some time, supplied Chicago with good sweet potatoes, and divided the strawberry market with one Dr. Egan.

South of Ottawa, though the vine appears to grow a little better, and, if any thing, to bear more profusely, I am inclined to think the grapes are more subject to the great enemy, mildew, and suffer from the endemic pest, the rose-bug.

Were it not for the rot and the rose-bug, wine growing in central and southern Illinois would not be in the least problematical. The bug may be shaken from the vines, and destroyed; and proper cultivation, and cultivation *at the proper time*, may prevent the rot, which I think is very much like gout, dyspepsia, etc.; a disease of repletion, and improper (medical?) horticultural interference.

For example: I saw, in and about Springfield, and in other places, much rot, where the vine had received high culture, and *more* where the leaves had been stripped off to let in the sun to the unripe fruit, while those in the poorest soils, and most neglected, appeared most free from disease, and quite sufficiently productive.

That the extensive cultivation of our native grapes, for making wine, will mark an era in our health and habits, I can not doubt. That we are not a healthy people at the present time, all must admit; and that intemperance is almost a national vice, and certainly a national evil, no one will deny.

Reliable statistics, and incidental history, show, that there is less intemperance, and less employment for physicians, in wine growing countries, than in those where distilled spirits are freely used.

* * * * *

I hold that *physiology* should be taught in our common schools, as well as sufficient *chemistry* to show our children the constituents and nature of animals and plants, as well as the food that nourishes them. Mankind will then see that alcohol contains no necessary nutriment, and that its action on the human system is always pernicious, and often fatal.

If pure, native wines were made as plentiful and cheap as in the wine districts of France, I have little doubt that the use of rum and whisky would soon become unfashionable; and I feel assured that the consequent use of wine as a substitute, would im-

mediately, in many instances, add twenty per cent. to the average longevity of our laboring population; and a larger figure, in those lamentable cases where men who know better,—the educated and the talented,—fall before the temptation.

I venture this statement after much thought, and painful investigation. Most of my conclusions are drawn from personal observations and experience, and my views are warranted by history and science. It is well known, that *pure wines do not intoxicate*, unless taken in enormous quantities, compared with spirits, and, even then, their effects are much less pernicious than would be half the corresponding proportion of brandy.

Claret, for example, contains about seven per cent. of alcohol; so that, in a pint of it, there is really but little more than the fourth of a gill of spirit, and that so modified by its chemical combinations with the juices of the grape, that it has not the "heady" or intoxicating properties of alcohol, but merely exhilarates, and temporarily braces and invigorates the whole system.

But do not misunderstand me. I much doubt if this, or any other stimulant, *ever* adds aught to the sum total of either physical or mental energy, or usefulness, though it may add much to both, under certain circumstances of depression, for a short given period; and the moderate use of pure wines, similar to claret, may not be attended with any serious consequences.

I do not claim that wine is *necessary*, or even very often useful, except as a *substitute* for more pernicious beverages, and questionable medicines in general use. As a general rule, we should, most undoubtedly, be healthier, happier, longer-lived, and more intellectual, were we to abandon the habitual use of all stimulants and narcotics: tea, coffee, wine, beer, tobacco, alcohol, and opium; and even spices, perhaps.

So it were better for all to be temperate in eating; comfortable, instead of fashionable, in dress; constant in exercise and cleanliness of person; natural in habits, and cheerful in disposition, as well as virtuous, charitable, learned, and wise. But, as practical men, we must take the world as it is: take a common sense view of things; and, in our efforts for improvement and reform, attempt that, only, which is clearly practicable, and not waste

our labor, and expend our feelings of benevolence, abstractions and theories, however beautiful or *possible*, whose ends we can not reasonably hope to attain in practice. And this great illusion of the nineteenth century is, I much fear, beyond the powers of our "ex parte" reasoning and benevolent persuasion.

I therefore recommend arguments as palpable as the evil we combat; and as bitter pills are coated with sugar, I advise delicious and acceptable persuasion, instead of sweeping denunciation, which seldom makes true converts to a good cause.

I advocate temperance and the vine, and do not condemn tea and coffee, or even tobacco in all cases: but tolerate these lesser evils, which we can not prohibit, for the sake of the greater good, which we are sure to attain by permitting these, and a return to a primitive beverage—"the pure juice of the grape:" though I acknowledge that the good would be perfect, *could we return to pure water, instead.*

THE CLIMATE OF ILLINOIS, ETC.

That our climate is, as I have before stated, one of the most variable and uncertain of any in the world, we have had abundant evidence, the past and present season. There is but one good feature upon which we can count with any kind of certainty in summer, and another in autumn. There is almost always a breeze in the prairies, in summer, and frost is long delayed, and our "Indian Summer" lingers with us in the fall, as if to compensate for the roughness of spring and the extremes of winter.

The winter of 1849-50 was as cold as any within my knowledge. In the city of Chicago, a self-registering instrument (not in a current of air) marked 17° below zero, at Christmas. From a little north and west of this point, I have 3° lower, and also 98° above in the shade. And, in 1848-9, I have rather questionable authority for the extremes of 30° below zero, and 102° above, in the shade.

Our coldest weather in this country, was from about a week before, to nearly a week after, the 1st of January. Some give Christmas as the coldest day; others different days up to the 4th of January. The air has its currents and its eddies, its "ebbs and its floods," like the ocean, and the slightest causes, and a small distance, may make a

great difference in the markings of the thermometer.

What the termination of the autumn of 1850 is to be, no man can tell; but the commencement of it has been disagreeable and disastrous in the extreme—the very counterpart of our spring and early summer, which were the dryest ever known.

About the 28th of August (though we had an introductory tornado and hail storm before,) there commenced a series of storms which have wasted this whole region, and filled the low lands and prairie “saggs” and “sloughs,” more overflowing than our heaviest winter and spring freshets.

Potatoes that had apparently escaped the usual disease, are now, Sept. 20th, nearly all rotten, or rotting in the ground; and the rot is, I should say, due to the rains, acting, of course, on the debilitated and predisposed constitution of the tuber.

Unstacked and temporarily secured oats and wheat have been spoiled or wasted, and much of the mown, and more of the unmown prairie grasses—upon which we mainly depend for wintering stock—are, or have been, under water and worthless—a melancholy illustration of the old saying, that “one extreme follows another.”

H. L. Bush, of Ottawa, writes on the 4th of January, the mercury fell to 11° below zero, and he gives that as his lowest mark. If so, the cold current must have passed around his place; as from a point but little north, I have much lower figures. I saw only an occasional specimen of fruit on peach trees, even 15 miles south of Ottawa, and if I remember, none there. I therefore conclude that Mr. B. did not observe the coldest morning, which was before the 4th of January, because I consider the death of the peach bud, on well matured wood, not prematurely started, a *certain evidence* that the cold has been equal to about 15° below zero.

The last was one of the dryest and most delicious of our usually delightful autumns. The wood of trees and shrubs was most thoroughly ripened, and was not excited to an untimely action at any time. The proof of this is found in the fact that not a twig of wood was killed on peach or nectarine, though the flower buds on these were all dead here, and even the plum and cherry developed but few flowers, except on some of the hardiest seedlings.

There were buds enough formed; on the branch of a peach, accidentally buried in December, and disinterred in April, there was a mass of flowers, and some fruit. The same thing was observed last year on branches buried in snow, and also in some trees screened from the morning sun and from cold winds; there were a very few specimens of fruit on exposed branches.

Our coldest winds are from the west. In this direction there is no open water in winter—no elevation of note, or timber of sufficient density or extent to interrupt or modify the stream of cold air that rushes down from the Rocky Mountains, and traverses a thousand miles of bleak and naked prairie, which radiates or exchanges no heat with the current, ever growing denser and gathering more force, until it comes upon us in this angle or bay of the grand prairie, “butt end foremost,” and as cold as though it had blown out of Siberia, or over icebergs, instead of the back bone or the semi-deserts of temperate North America.

Altitudes and aspects are not sufficiently considered in this cold excitable climate. The greater specific gravity of cold air tends to keep it in the valleys, on still nights, during all seasons, though a current of air may draw through a valley and prevent frost in summer or spring, when its icy fingers are busy on the heights; and radiation may act locally, and save a low spot that ought not to escape according to the above rule.

So, also, slight irregularities in the general surface of the country, and especially the occasional groves of timber, crowning the highest elevations, do, unquestionably, sometimes turn the cold stream aside, and thus make a difference of several degrees in the same vicinity.

But, after all, the general rule holds good, and you will find killing frost ten times in the lowest, to once in the highest situations. Peaches much oftener fail in the low lands than on the high swells in this region.

And here, again, aspect does as much as a preventive to loss from cold. The *frost* does not cause death in all cases, though it does in many, and predisposes to death in the others, when the *thawing*, if rapid, is alone to blame. Rapid transitions, rather than extremes, produce the mischief. A northern or western exposure will preserve the tree and its incipient fruit, when a southern or

eastern one would often be met by a bright sun, a sudden thaw, and a certain injury or death.

Some writers are of opinion that a western aspect for peaches is a dangerous one in winter, on account of our cold winds always coming from that quarter during the season; and, indeed, our peach trees are "winter killed" four times, while they are spring killed once. But further south, the reverse is the case. And my experience leads me to doubt the truth of the above supposition, for my trees, when winter killed, have suffered most when facing the south, and *least* when fully exposed to the north-west, as my peach orchard now is, though at one time I had many trees on a southern slope, of which not one survives.

INSECTS INJURIOUS TO FRUIT.

In many parts of this State, the question of insects is one on which depends the cultivation or abandonment of some varieties of fruit.

I regret to say I am not a scientific entomologist; and yet I am fully aware of the immense amount of injury caused by the untold millions of these depredators. The farmer suffers as much as the pomologist; and both are too often alike ignorant of the appearance, habits, and history of their busy enemies.

I have been asked more than once if I could account for the premature fall of a glorious promise of plums. One man who had a fine plum yard, told me that he should cut down his trees, though they were of choice varieties, and generally set full. He had made up his mind that choice plums would not grow in Illinois. I showed him the grub of the curculio, and he, for the first time, learned that an insect had destroyed his crop. I much doubt our ever getting rid of the curculio altogether; but we may find a partial, if not a certain remedy, which may be more readily applied than those now known.

I have conversed with many plum growers during the past season; all unite in saying that jarring the trees regularly every morning, and catching the beetles on sheets, for a few weeks, immediately before they commence depositing their eggs, will save a fair proportion of the crop, on trees thus treated. But few have patience and perseverance for this

remedy; and I fear the LIME treatment may be open to the same objection; for, as near as I can learn, it must be applied as often as may be necessary to keep the germ actually covered with the material; for the roughness of the surface seems to have something to do with this preventive.

All insects, so far as I have observed, have their antipathies; and most of those we deprecate dislike strong odours, bitter tastes, and alkaline bodies. I have sometimes thought that the hog disturbed the curculio by his disagreeable odor; but it is more probable that the instinct of the insect leads it to fear danger from his appetite; or that the rooting propensity of the animal may disturb its progeny in their earthy burrow. We must take more pains to study the nature of this insect, before we abandon the culture of the plum.

The Rose Bug.—In my vicinity this loathsome insect is confined as yet to the flower garden. Further south, they attack every green thing, and destroy much fruit, especially grapes. When I was there, they had disappeared, though I saw a few on shrubs in the woods, that a farmer said was the same bug that had eaten his fruit. This insect was not our rose bug. It was preying upon the foliage, and appeared to be much more voracious and more timid than the rose bug of our gardens, though in general appearance not unlike.

I was told that bushels had been gathered from fruit trees and vines, by shaking them upon sheets; still their numbers are so great and their food so general, that few persons had attempted to fight them systematically.

The Measuring Worm.—Through the month of June, 1850, these worms were very destructive, especially to recently planted fruit trees, that, from the early drought, had failed to vegetate at once. I have shaken twenty of them from a small nursery tree, from which they had eaten every leaf. I never knew them troublesome before.

The Caterpillar.—There is a small native caterpillar, that is always found in groves in summer, where he feeds on the leaves of nearly every species of tree and shrub. I have never noticed him in the orchard until this season. In the central and western parts of the State, I found him in possession of nearly half the apple trees. At first he merely eats the cuticle from the leaf, which

gives to the branch on which he fastens a very skeleton-like appearance; but, as he increases in size, he makes sure work, and scarce leaves more than the foot-stalk; and, when fully grown and concentrated on the branch or body of a small tree, he even eats the bark. This worm spins a light, but very tough web, and often ties several branches, and sometimes the entire top of a small tree together. They do not go out of their web for food, and it is very easy to strip them off, shroud and all, with the hand, or by twisting a stout stick into the nest, when out of reach of your hand, you may bring down the whole colony; for they do not try to escape, and their strong viscid covering envelopes the worms and brings them away without difficulty.

These caterpillars are very disgusting objects, and are apt to ruin a tree if not removed. I have lately discovered several small trees in my nursery that had been overlooked, and the caterpillar has not left a leaf or a green shoot on them. In central Illinois I saw them on the first of July, and I found them here on my return, about the last of that month; and now, September 20th, there are still a few to be seen in the center of the nests. It is our own fault if they injure us; for it is no trick at all to destroy fifty colonies in an hour or two; and yet I think I have seen five hundred of their nests in an orchard of fifty trees—giving it the most ghostly and disgusting appearance imaginable.

There is another gregarious caterpillar, much larger than the one above described, and more voracious, which I once mistook for the "canker worm," (which I do not know that I have ever seen.) This worm has no web, and the head moves from branch to branch, taking every leaf before him. I have found them from near June to October. They seem to like the apple best; but last autumn I saw this worm in Mr. Hovey's nursery, near Boston, on the cherry. You will always find them in a heap, and can either remove the limb with them on it, or jar them off into fire or water, in some vessel held by an assistant. For large trees you may want a ladder; but I have generally found these, and nearly every insect feeding on foliage, rather partial to small trees.

FIRE BLIGHT, PEAR TREE BLIGHT, ETC.

A disease known under the above and other names, has shown itself in my orchard this summer. It commenced here about the middle of June in bearing quince trees. The trees affected had been highly manured last fall, were loaded with flowers this season, and gave every appearance of an enormous crop, until the appearance of this disease.

At first I noticed that the sets were withering, and in a few days I found the extremities of nearly all the shoots blighted. The dead twigs were all removed with the knife, and I did not see them again until the last of July, when I found the disease had broken out below the amputation, and in some cases extended to the base of the branch.

About the first of August, I found that a few very thrifty young apple trees, some rods from the quinces, were diseased, though in general but a few shoots of the wood were involved. I amputated as before, and apparently with better success than in the quince; still, the disease was not removed, as the blight again appeared, generally on new shoots of the main branches first affected.

Only two pear trees have suffered, the one (Harvard) slightly in extreme leading shoots, the other (unknown) in one large main branch, which is dead to the body of the tree, where there is also some disease on the side from which the limb grew.*

There is one circumstance connected with this affection in my orchard, which is a little suspicious at the first thought—the blight is *confined to one corner of my grounds*. But before we conclude that this is evidence of the transmission of the disease from one subject to another, we must remember that this corner of my orchard has been highly cultivated, and I think much too liberally manured, while the balance has had no manure, and little cultivation for the last two or three years.

And then, again, in the middle of the State, where I found this disease shockingly conspicuous, I noticed that its attacks were not circumscribed, healthy and diseased trees standing side by side, through most orchards, and in every instance the thriftiest trees seemed to be the most blighted.

I saw much more of this blight on the east, than on the west side of the Illinois

* Query.—Is this the same blight?

river, and I find it much more prevalent south than north, and I was told that the disease had been noticed in the apple last year, and something like it in the pear, in previous seasons, though never so destructive as at present.

I found the popular opinion of the cause of this affection, to be the same as that held by some good Pomologists, *insects*. In accordance with this notion, I have looked for insects, and you may have heard, perhaps, that doctors are famous for finding what they look for in post mortem examinations. With the aid of a tolerable magnifier, as well as my desire to find them, I discovered a few grubs in diseased twigs, and some lively little insects on the dead leaves and wood, and other appearances not natural, and yet I have been obliged to come to the conclusion that these are *effects of decomposition*, rather than causes of disease.

The grubs found (which had certainly killed the twig, by entering at the base, and working up,) did not produce *blight*, the appearances in the case being very different on dissection, and something very like the other insects and appearances, were found on shoots dead from other causes.

I therefore believe that we must look for the cause of this affection in the high cultivation, or faulty food of the tree, in the air, or in the earth. I think that it is a true epidemic, which attacks as in animals, the grossest feeders and enfeebled constitutions, in preference to the hardy and temperate subject.

The disease is not unlike "*mildew mortification*" or "*dry gangrene*" in the human subject. If left to itself, "a line of demarcation is formed, and a separation of the living and dead parts ensues. It may be best to use the knife freely; and yet, from my experience, I have doubts on this point. I think that the quince, which was cut the most freely, will never recover. On that the disease has certainly maintained itself with renewed powers; perhaps we did not cut low enough. Another season will be required, in order to come to any satisfactory conclusion with regard to this treatment. I do not believe that this disease is a new one. It has appeared before, and then disappeared for years. I think that I have seen something like it in forest trees a year or two ago, and I doubt not that we shall see more of it

hereafter. If the disease be more prevalent now, than it was a century ago, it is because it has more subjects to act upon.

I think that insects and diseases are not proportionably more common now, but are more *noticed*, because we are beginning to value fruit more highly; and the choice varieties receiving higher culture, are becoming more and more enfeebled in constitution, and more obnoxious to the attacks of the natural diseases and enemies of the orchard and garden.

And now, *is this disease the pear blight of the East?* It is *not* like the disease I saw in Albany, New York, and not like that which has shown itself in some of my small pear trees, brought from New York city, and Cleveland, Ohio. In these cases the body of the tree was first attacked, while in the blight I have been describing, it is first developed in the bark of the current year's wood, or in the circumference of the leaves thereon. It almost always commences near, though not always at the terminal shoot. In a very few cases, I have seen twigs at the base of a leading shoot affected, and the bark of the shoot at the origin of the twigs partially involved, while the main shoot itself had a healthy appearance above this spot of disease.

In a few cases, wood of one, and even two years old, is dead on the quince trees; and I have seen a few inches of one year old dead in the apple and pear; but in general, only the current year's growth is involved in the mortification.

What shall we do for this serious affection? I am at a loss to say. Let us not do too much. I am inclined to think that we have manured our orchards too highly, and cultivated them too irregularly—sometimes through the whole summer, sometimes not at all. It were best, perhaps, that young trees should receive some culture, and *that* between the middle of October and middle of June annually.

It must be borne in mind, too, that the past has been a most singular season; very dry until July, and very wet since, and fruit trees are even now (Sept. 20) making wood rapidly. The great prevalence of this disease may be attributed to this circumstance. I have some facts that seem to favor this idea. On the west side of the Illinois, and near the Mississippi, where I saw but little

blight, there had been more rain in the early part of the season.

Let us watch, and work. Try the knife on some, and potash, sulphate of iron, etc., on the bark or at the roots of others. Do not despair, there must be a remedy, or at least a preventive. Let us look for it.

FRUIT AND FRUIT CULTURE IN ILLINOIS.

That there were some excellent apples and pears grown in the southern portion of this State, long before the settlement of the northern portion, I have no reason to doubt. In my report to "The N. A. Pomological Convention," I stated that I had no "certain evidence that there was a fruit tree, of a cultivated variety, *forty* years old, in Illinois"—nor thirty, as I have been quoted, and, of course, I meant by "a cultivated variety," one in general cultivation. I have yet "no certain evidence," that I was far out of the way in this statement, mauger the strictures of the Rev. John M. Peck, in the *Western Watchman*, to which severe handling my loose manner of expression had, perhaps, made me justly obnoxious. But omitting the Rev. gentleman's not over flattering personal remarks, I quote with pleasure the information he affords on "The Era of Illinois Fruit." He says:

"More than thirty years since, we feasted on luscious pears gathered from trees in Kaskaskia, which had then been planted about a half a century. And should he visit the old settlements in St. Clair, Monroe and Randolph counties, we can show him the sites of apple orchards planted by the first American settlers, after the conquest of Illinois, by G. R. Clark, the trees of which attained their full growth, performed good service as fruit bearers, and died of old age. In 1820 we were presented with an apple gathered within two miles of our present residence, and which measured thirteen inches and a half in circumference. The first generation of orchards in southern Illinois having served their period, have gone the way of all the earth."

Notwithstanding his personal remarks, I feel grateful to Mr. Peck, for he is the only person who has afforded me the least reliable information from "Lower Egypt"—that land of unsurpassed fertility—intended by nature for THE GARDEN OF THE WEST; but the greater portion of which has fallen, I fear, into the

hands of those illy calculated to develop its wonderful resources. Now, do not misunderstand me, I pray you. The people of this region are men after my own heart. I love them and their ways—for I was once of them, and my *practice*, as a farmer, is too much like their's now; and, certainly, my feelings and my acts are often in unison with the natural manners and customs—careless hopefulness and "good intentions" of the genuine frontiersman, the legitimate son of the south west.

Thus much may be allowed me, in answer to my questioned pomological accuracy, and the charge of partiality to the north; and, permit me to add, that it is my full belief, that were a few of our western editors, like Mr. Peck, to unite in urging the subject of primary schools, and subscriptions to agricultural and horticultural papers, these farmers of the south would soon excel us of the north, in fruit culture and general farm products, as much as they now do in raising corn and making pork; for that they have the best soil and climate there can not be a question.

And I think the remarks of Mr. Peck, and my own recent inquiries, bear out another statement of mine, in the above named report, to wit: that western seedlings are much superior to those of the east. For I still presume, from what information I have been enabled to gather, that the "luscious pears" and apples mentioned, were true western fruits.

I saw some large pear trees, the present season, in the city of Springfield, the fruit of which, the proprietor, Doctor Dodd, informed me was truly excellent. The Doctor purchased these trees twenty-five years ago, and supposed them to be engrafted, but they are unlike any known variety, and show unmistakable evidence of their native origin.

Fruit trees, in central and southern Illinois, make wood with astonishing rapidity. Trees of no more than twenty-five or thirty years' growth are of almost forest sizes, though growing in uncultivated soil. I have seen nursery trees, where the cultivation had been liberal, as large at two or three years, from graft or bud, as ours are at four or five.

Their nurserymen sell trees at half less than our prices, and still make more money therefrom than we do in this northern region; and from their rapid growth, their trees are

much cleaner and handsomer than ours; every man who sells trees knows the benefit of this specious appearance in effecting rapid sales.

Of all the towns visited by me in Illinois, Springfield can boast the best show of fruits and flowers, and also "Jimson weed" (*Datura*) in the streets and vacant lots. And by the way, Illinois streets, and roads, and fields are fast filling up with these daturas. The "Indian mallows" (*Abutilon avicennæ*) "May-weed" (*Maruta cotula*) and common mustard.

For the introduction of one or two of these pests, horticulturists are responsible, and I therefore note them as worthy our attention, and think the sooner we set about eradicating the three former, and confining the latter within proper bounds, the better for the farmer and pomologist, for they are all found in western orchards and gardens, as well as road-sides, and all, except the mustard, are useless weeds, and next to Canada thistles, for their powers of perpetuation and extension.

I was indebted to my old friend, Mr. J. Frances, editor of the Illinois Journal, for much local information, and for the pleasure of visiting at least one garden, equal to the best in the east; and many fruit yards, rich in oceans of morello cherries, and what is far more to the purpose, in a promise for better fruits, especially grapes, of which I saw a most encouraging abundance.

The whole of central Illinois is liberally supplied with this worthless morello cherry, and what is worse, the fruit is highly prized for cooking; and as it costs nothing, is occasionally a profuse bearer, and is as hardy as a black-jack oak, people will let it grow and cumber ground in towns and villages which might produce really delicious fruits. In the country, where land is plenty, I have no objection to these cherries; they are useful to feed birds if nothing else; and birds are often our best and most delightful assistants.

I saw some fine plum trees in the yard of Mr. Frances, but the fruit all punctured; this is the case everywhere.

The first peaches I observed were in Peru. From this point south they became more and more plentiful, and soon every tree was overloaded. I think that in central and southern Illinois the peach crop of this year must be one of the best. Out of the grounds of

nurserymen, I saw but few "worked varieties," most farmers insisting that their seedlings could not be beat. One gentleman informed me that he could sell his seedlings for the same price that budded varieties brought, and often for more, as they were *larger* than the best sorts under name.

This state of things is really the effect of ignorance, for not one western man in an hundred ever tasted a first-rate peach or pear, or ever saw a really fine cherry. My experience, and the evidence of others, who know what first rate fruits are, convince me that these native seedlings are often "good," but not "best," or even "very good," according to the rules adopted by this Congress, and which must guide well informed pomologists, where fruit culture is a science.

Still, I am of opinion that it may be well for western nurserymen to test some of the best of these tolerably "good" local varieties, as my experience and observation lead me to believe that they are sometimes hardier and better bearers than some of the varieties known in the books; and it is better to have a bountiful supply of "good" peaches, than only an occasional specimen of the "best" known sorts. But do not misunderstand me. I would still propagate freely the best known sorts, until their powers of endurance and comparative productiveness are better known in this extremely uncertain and changeable climate. As it now stands, we can not say that we have given them a fair trial, and it may be that most of these will prove as hardy as our own hardiest seedlings.

A degree or two south of Chicago, western varieties of the apple are very popular, and some nurserymen work more of these than of eastern sorts; and in this they may be right, for there are some apples that yield abundantly in New York, which have hitherto proved to be very shy bearers here, while some old sorts have gone ahead of our own seedlings in productiveness as well as quality.

I have never seen a seedling tree in Illinois better loaded than our *Poughkeepsie*, or *Winter Russets*, *Rambour Franc*, *Sapson*, *Spice Sweet*, *Hawthorn*, *Kerwick Codlin*, etc., though none of these are strictly "first rate" fruits.

The evidences of this year have led me to believe that the apple is much more productive in this lake region than in central Il-

linois. In cherries, grapes and peaches they certainly beat us. We have had one large crop of delicious plums here. Further south, this fruit has generally been an entire failure, at least so far as I could come at the plum statistics.

The pear tree flourishes, as well as the apple, south. In the gardens at Peru, and in the grounds of the Peoria nurserymen, I saw small standards of the Bartlett and other good varieties, literally loaded with the largest and fairest specimens.

Edson Harkness, of "Fruit Farm," Peoria county, has, I should say, about twenty large worked pear trees, on which the fruit hung in ropes the last of July; but I will not anticipate his description and show of these, which you will doubtless have before you. I must be permitted to add, however, that Mr. H. has really the largest and healthiest looking orchard of bearing trees, of their age, that I ever saw in any country. I think he has about one hundred apple trees in bearing.

But this is nothing to what Isaac Underhill, of Peoria, has "put in for," in the orchard line. I passed Mr. Underhill's orchard in the evening, and had but an indistinct and unsatisfactory view of it; but I here append a letter from him, describing his five hundred acre orchard, etc.

PEORIA, July 20, 1850.

DR. J. A. KENNICOTT:

Respected Friend—In accordance with your request, I will now give you a brief account of the "Rome Farms," and the orchard I am endeavoring to rear on the same. The farms are situated at the head of Peoria Lake, eighteen miles north of Peoria; soil a black loam, intermixed with sand. I have about two thousand acres under fence, all fit for cultivation.

Having been persuaded that an orchard, well cultivated, would be profitable, I appropriated one field of five hundred acres for that purpose, and in the spring of 1848 I commenced planting the trees. I have set out, in rows about thirty feet apart, twelve thousand of the best varieties of grafted fruit, principally winter apples; about ten thousand of them are alive and growing finely. I lost about one thousand trees by putting too much unfermented manure in the spaces dug for the trees; also, about one thousand more by letting the roots of the trees get frozen

after they were taken from the nursery. The trees were principally raised by my brother, David C. Underhill, in Lasalle Co., Illinois; the grafts for which were taken from the nursery in Westchester county, N. Y., where we had our pomological education. I have set also in orchards about seven thousand peach trees, which are doing finely. The principal enemies I have had to contend with in rearing apple trees, were rabbits and caterpillars. The former I soon disposed of by paying twenty-five cents each for their scalps; after paying out about seventy-five dollars there were hardly enough left for seed.

The large caterpillar is very troublesome in May and June, and the small caterpillar, or wire-worm, in July and August. By close attention, I keep the trees nearly clear of them. I do not sow any of the small grains in the orchard. The trees do best where the ground is cultivated in corn. Keeping the ground spaded for a small distance around the trees appear to do but little good. Great benefits have accrued to the trees where they have been well mulched with straw or coarse manure on the surface. I also like the plan of having the limbs of the trees branch within two or three feet of the ground; they are more safe from the effects of the high winds of this country, and it affords some protection to the bodies of the trees from the sun.

My fences are principally made of rails, called the Virginia worm fence. I made about two miles of board fence, black walnut and oak posts; in seven or eight years the posts began to rot off at the ground; but by staking and riding I manage to keep it up. I have tried the Osage Orange for hedging, but did not succeed in making a fence. The seed did not come up well.

Yours, truly,

ISAAC UNDERHILL.

Agricultural Bureau.

HORTICULTURE has been aptly called "the fine art of rural life"—the poetry of rural labor. That branch of horticulture on which we unite presents more substantial matters to the animal appetite, as well as a refined and luxurious enjoyment to the educated mind.

Americans are said to estimate every thing in dollars and cents. Pomology is therefore the popular feature of horticulture in the

United States. It creates food, preserves health, saves medicine and money, and to the moralist, I might add, tends to make mankind wiser, better, happier, and more desirous of sharing the blessings which they have proved, with the many who might enjoy, without diminishing them. Horticulture is a humanizing and christian profession—pomology makes it a paying one.

SCIENTIFIC AGRICULTURE is *gardening on a large scale*. We are therefore agriculturists, and as such we are bound to stand by our class. But of that anon.

FARMING, without science, is like quackery in the practice of medicine and surgery—a little experience goes a great way, and quacks sometimes hit right, and so do uneducated farmers, and nature does the rest. A good constitution and a slight affection may do well in the hands of the medical quack, and a rich soil, until exhausted, yield fair crops to hereditary or traditional tillage.

There may be some excuse for medical quackery, or good reasons why more than the ignorant tolerate it. The science of medicine though one of the oldest, is *not perfect*, and its great truths have heretofore been locked up in THE SCHOOLS—a sealed book to the million—and those who have just dipped into the surface of a science have more faith therein than he who has searched to the bottom. Man loves mystery, and delights in the marvelous; and in sickness men have little reason and much credulity.

But there is no excuse for quackery in the cultivation of the earth. The eternal truths of this science are as palpable as the rocks from which our soils are derived, or the nature of the plants which they sustain. We should not tolerate quackery, and yet nine tenths of our practice is empirical. Our sons are born farmers as much as "the seventh son" is supposed to be "a doctor."

And now as I have incidentally mentioned the science of medicine, indulge me in a tribute to my whilom professional brethren, and a warning to the farmer's son, to seek some less arduous and responsible employment, if he *will* leave the plow. No man sees so much misery—feels so much painful anxiety—has so little certain leisure, or natural rest—or is so poorly paid, or so little honored, in proportion to his actual worth and professional usefulness as the physician.

The study of medicine is the study of

nature. Its students are therefore good theoretical agriculturists, and from the very uncertainty of their own chosen profession, they turn the more naturally to a kindred one; and enjoy their success in gardening or farming, in proportion to their greater knowledge of "the principles of life," in all its forms and phases, as it runs through the perfect chain from the mineral to the man. The man who must labor with his own hands for the support of his household, has little leisure, and often less inclination to study,—for as you all know, constant bodily toil is incompatible with perfect mental development, or much mental effort, though a moderate amount of physical exercise is positively essential to the healthy growth and permanent integrity of the organ of thought, as well as the functions of animal life. The body and the mind should both be educated, and both should labor. With more knowledge there would be less toil, with a better wrought frame there would be a less overwrought muscular system. "Head work" and "hard work" should go together.

But in *practice*, whatever it may be in *theory*, we have two "*classes*" operatively as distinct as though of two races. The one in round numbers, nine-tenths of the whole, are PRODUCERS, and mostly "uneducated," the balance belong to commerce and the "Professions," (including a few rich men, and some "loafers,") and are more or less "educated." These *produce* no wealth, though they often gather much that we create. Some of these, as the merchant, are necessary to the producer—the others may be more or less so. (though sometimes little better than "necessary evils.")

A few among the sons of toil continue to give one of their children a "liberal education." But from a mistaken notion that wealth and fame and true happiness are to be found only in commerce or the professions, nearly all of these favored sons leave the pursuit in which they were born, and carry fresh energy and new power to the small privileged class, whose vocation is often the perpetuation of abuses, and whose action is too often like the brake upon the railroad cars—a check to natural progress, and that reasonably approximating equality—the legitimate offspring of our free institutions.

It is nevertheless a gratifying fact, that a man of mind and liberal education, occasion-

ally returns to the plow, and aids the less fortunate farmer by precept and example; and there are many more who, by energy and perseverance, continue to educate themselves, without troubling our colleges; most of these are amateurs, and some of them professional pomologists. They are of and with us. The force that these men have given to the agricultural press, and the consequent agricultural improvement, can scarce be estimated.

The men of the budding knife have ever held out a friendly hand to those of the plough. As a body, we have more leisure, and perhaps more inclination for scientific pursuits. We have more esprit du corps, and our moral force is more concentrated, and can be wielded with greater efficiency. *We must not forget our younger brethren* in our own more immediate pursuits; and while we settle our particular affairs, we must not neglect those of the less fortunate husbandman.

It can not, I fear, be denied, that as a body, farmers are ignorant and bigoted, and full of most illiberal prejudices. We think too meanly of ourselves and of our pursuits, and too highly of those whom chance and old custom have placed nominally and operatively above us. And it is certain that few men ever become great in any pursuit which they deem degrading, or which "the world" holds in contempt.

Ignorant farmers sometimes think that they know all about their business, and often say so; some affect to despise the effeminacy of those engaged in trade and the professions, and to put a just estimate upon their own independent position and healthful and manly employment; but alas, many of these deceive themselves; we know that we lack knowledge, and FASHION is an arbitrary master, and I fear our sons and daughters too often envy the soft hand and fine coat of the "counter jumper," and the inane ease and conventional gentility of the city belle, or the brainless foppery of her male prototype.

I trust that our children, though wedded to the plow, are in a fair way of being divorced from these fancies of the plowman. The dignity of labor is beginning to be acknowledged, and the class that has hitherto monopolized the sources of a "liberal education," and which actually exercises all political power, must resign its potency with its

privileges, when the few shall have become merged with the many.

We know that in mental organization, the producing classes are not inferior to this privileged "caste," who fill our colleges—occupy our pulpits—attempt to cure our diseases—direct our armies and our navies—make one law for themselves, and another for the million—and to whom millions are freely given, while a few thousands, modestly asked in the name of "*over three-fourths of the people*,"* is coldly denied.

Whose fault is this? Our own, most decidedly. Can we reasonably expect our rulers, and those who have held these privileges since the foundation of government, and the time when "knowledge became power," freely to aid in divesting themselves and their order, of the power and consequence which the present system guarantees? By doing too much, politicians might partially change to a fact that beautiful fiction of our political creed, "that all men are born free and equal."

As a body, we are not yet fully prepared to demand all our *political rights*. But we should demand, and we shall obtain, a little notice, and it may be a little aid, to help the farmer till his acres with less labor and greater profit; and with reference to the future, as well as the present demand upon the capacity of the soil. Our law-makers admit that agriculturalists are the "majority," and this same word, "majority," is the only argument that ever brings conviction to the mind of a mere politician.

My friends, the uneducated farmer is not yet ready to advance this argument. And it is, I well believe, expected of us, that we shall assume the responsibility of demanding specific aid to the agricultural interest, as well as a specific education for the sons of farmers.

There is no arrogance in this. It is known that the horticulturalist is the true friend of labor, and the enemy of all humbug and pretension. We are not politicians—few of us ever meddle in the affairs of the nation; but we have a duty to perform, and an object in view, which may cause us to step out from the shadow of "our own vine and fig tree," to see that our

* See Minority Report of committee in Congress, on Agricultural Bureau.

brother has justice—that the husbandman who feeds and clothes and supports the nation, shall be of “some account” in the councils of the nation.

Should it ever become necessary, it were easy for us to unite the sons of labor for “party purposes;” but politicians are too shrewd observers, to have the folly to deny what we may justly demand, for they know, as we do, our dormant power—that the mechanic and manufacturer are of us, and with us—that the merchant is our factor and our friend; and more than this, they know what all history hath shown, that from among us the breed of great men has always sprung. As the priests of old were from the tribe of Levi, so hath God decreed that godlike souls shall come from among the sons of noble labor.

All great political movements require concert and combined action, to secure success. So far as the farmer is concerned, we must effect a revolution in political sentiments, if not in political combinations.

It has been said that all great revolutions require “a man of destiny” to lead them to a successful result. Not so; at least, not here, nor in this nineteenth century. *Public opinion* creates revolutions. Great men, like Cromwell and Bonaparte, guide the storm they do not raise. But we shall have no lack of leaders, should we find it necessary to give a right direction and efficient action to the opinion fast gaining ground, that more patriotism and less pretension—more action and less talk, are desiderata in our legislative halls.

Those among us who are inclined to take a narrow and restricted view of the objects of this Congress, will doubtless deem this long preamble a mass of irrelevants, if not uninteresting matter. But, my friends, there can nothing be done to aid the many, without effort in the few. We represent a strictly agricultural interest. An individual, however bold and enthusiastic in a good cause, can never move politicians; but as a respectable and intelligent body we may, and we are in duty bound to “set this ball in motion,” which the AGRICULTURAL PRESS will then “roll on” until its weight and impetus shall become irresistible, and the farmer be made “of some account in the State.” As individuals, it is true, that we have little to hope from an

Agricultural Department connected with the machinery of our Government. If properly and faithfully conducted, it might even tend to diminish the profits of our business. But God, and our profession, have made us philanthropists. Our object is not so much individual interest, as “the greatest good to greatest numbers.”

Though much enlarging our sphere of usefulness as a self-organized and republican body, we are not transcending our duties when we adopt as a subject worthy of our united action, this measure, recommended by Washington and Taylor, and in which “three-fourths of the people,” and the class to which we belong, are deeply interested.

We can see a thousand ways in which an Agricultural Bureau could be made immediately and largely serviceable, to this great and indispensable interest; and if we select the poetry of agriculture as our branch of the profession, we have the greater reason, and the more precedent, to constitute us its legitimate champions.

Of course the benefits to be expected from an Agricultural office at Washington, will be somewhat in proportion to the amount of means at its disposal, and the fitness and energy of those who may chance to be placed in charge thereof. These matters may not be deemed unworthy of our consideration, for if Agricultural and Horticultural associations neglect them, this office of ours may chance to become a mere political machine, and help to keep the farmer in his present position, by flattering him that he has the substance, when he may have not even the shadow of a useful national agricultural organization. A “Bureau,” governed by party, or administered by politicians, might prove an unmitigated evil, retard scientific progress, and divide, instead of uniting agriculturists—and God knows we are sufficiently divided now—into a small class, who read books and rural journals, to teach them how to work, and a much larger one, that work as their fathers did; and as their lack of science requires much labor for the same results, they have seldom much time, and in reality no inclination to read aught save the partizan papers, put into their hands by their party leaders; and except modern novels, which is often the least profitable, and sometimes the most debasing of all printed matter.

That some sort of an agricultural office will soon be created, no one, who reads the signs of the times, can doubt. It is true, that the report of the Senate committee is not very encouraging—proposing the *enormous sum of sixteen thousand dollars*, for the benefit of *sixteen millions of Agriculturists!* And “the immediate Representatives of the people” (by the majority of the committee) refused to report at all—and yet, a minority *has* modestly suggested that we might be bought a thousand dollars cheaper than the Senatorial offer!

This only proves what I before advanced, that we think meanly of ourselves, and our pursuits; and instead of *demanding*, as farmers by profession, and “three-fourths of the people” *at the polls*, we permit ourselves to be played with, by political gamblers, who move us as they would the “pawns” on a chess-board.

In the name of common sense and human nature, how long shall we put up with such indignities? There are good men enough in Congress to look to our interests, if we seriously stir in the matter. Those who know our wants and respect our worth, will see to it, if we seriously demand this Agricultural Bureau, and the talking politician will be very shy of risking his popularity and his *place* by opposing us.

Does any one pretend that the money this department will cost is an object worth talking about? If so, refer him to the reports and “estimates” of the engineer departments for 1849-’50, and the appropriation bills of every year. I open at random, a volume sent me by “our member,” on page 221, I find that for the fiscal year, \$35,000 is asked for one fort, and three pages further on, \$75,000 for another—and this, too, in an age when even military men hold that the breasts of Americans are our best fortifications, and that there is no fort in existence that good soldiers can not reduce.

But I have said enough on this subject. *Policy*, under the circumstances, should have kept me clear of this theme. But I am no politician, as you all know; and as a liberally constituted agricultural department, connected with the machinery of our government might, in my opinion, be made all efficient, in organizing and educating farmers, I am bound to advocate it, regardless of any personal

consequences which may attach to my interference.

But I have little hope from such an office, unless by universal consent it be turned over to us, when created, *irrespective of party and independent of partizan obligations*. One principle in our government, like that saving one in our constitution—our highest judiciary—that may preserve its usefulness, free of party trammels, and partizan warfare.

In no other way can such a department be made generally popular, and permanently useful—and without this feature, it would only tend to divide and distract the efforts of individuals, and the great and beneficent associations that are now raising the tiller of the soil from a mere machine, to a reading, thinking and scientific agriculturist.

If I have made myself understood, you will have gathered, from my many words, one thought worth pondering. It is this:—That we, though calling ourselves Pomologists, *are*, in reality, scions of the great family of husbandmen; and as our particular branch of tillage has opened to us more leaves of the book of nature than the farmer can read; as our tastes, or our necessities, have made us reasoning and observing men; and moreover, as our good fortune has led us to unite in Congress, for the general good of Pomologists, we are bound, by every generous tie, to aid the less fortunate of our class in all things connected with the cultivation of the earth.

EDUCATION.

And the first and last thing wanted by the farmer is *education—knowledge*. In this we can assist him; and what we *can do* we *should do* in this connection.

Agricultural and horticultural societies have done much toward waking up and encouraging all who labor for bread; the mechanic as well as the farmer and pomologist. At the shows of these societies, our brethren see what others have done, and what science may do. And the people of the “universal Yankee nation” are very apt to believe that “what man has done, man can do again.” Thousands are annually startled from their old routine practice, by what they see at these exhibitions, and try to imitate or excel the products of the farm, or the work-shop, which have thus excited their professional emulation.

Let us, therefore, help to establish county and State societies throughout the land; and let us add one feature to them which most of those in existence now lack—not exactly lectures, but brief observations on every new or extraordinary subject. This may be done by a system of familiar questions, put to every exhibitor by the proper officers of the society, and publicly answered.

I have read reports of such public conversations, in the proceedings of the AMERICAN INSTITUTE, New York city, and some other societies. This mode of conveying information, though not always as clear and reliable as written statements, possesses many advantages. Let it be generally adopted, and much good will result therefrom, and the persons who can not or will not read, may possess themselves of a few facts, on which to base their own experiments. I have heard of the adoption of this plan in small neighborhoods; without shows, and with the happiest and most encouraging results.

But, after all, our principal engine is the *agricultural press*. The press may have been brought into existence by the societies; though that admits of doubt. The press is, however, the organ and the very soul of the associations. Man is a vain animal, and loves to see himself "in print," and he often works hard, and effects much good, with that powerful, though unacknowledged desire.

The agricultural press must be sustained. Public opinion is the true sovereign of the Anglo-Saxon; and he will give even money, (which is too often his God,) to propitiate it. Say what we may about the press being but the mirror of public opinion, it certainly *creates* as well as reflects that mighty power.

Let us, then, sustain our agricultural journals. If we can not give money, as politicians do to theirs, we can give a little time. Many of us have influence, and powers of persuasion. Let us exert these with our neighbors, and procure legitimate subscriptions; knowing, as we do, that for every dollar we induce our brethren to disburse, they will receive the value of ten in useful knowledge.

The agricultural press is now the most efficient and legitimate advocate of common school, and specific agricultural education; and this is a subject of more general and vital importance than all the agricultural bureaus and societies in the world.

The farmer's sons must be educated for his

profession; the mechanic for his calling, and the voter for the *perpetuation and extension of our free institutions*, and "the manifest destiny" of the Anglo-Saxon race.

And we should educate our daughters better than sons. If "the boy is father to the man," the MOTHER not only bends the twig, but her influence, for good or for evil, on the future career of the son, is as palpable as the successful graft of the pippin on the crab, or a melting pear on a native thorn.

Do not, for a moment, suppose that I believe the mind of man like this paper, on which I write what thoughts I please. Men are as different in mental organization as in features. And yet even idiots are susceptible of some education; and pippins will sometimes grow when inoculated on crabs, and pears on thorns, though not on hemlocks or black-jacks.

Scientific education can do much toward redeeming a base or sterile mind; and it can do every thing with that on which God smiled at its inception and development. But, without education, this child of the Deity will be but as the statue in the block of marble, or as this paper, before it was blotted by my uneducated speculations, and chance thoughts, which the very system I advocate might have converted into gems of beauty and usefulness.

Agricultural education may be thought "one of the humbugs of the age." Still it is a principle that I hope to see tested before I die. I would ask no larger hold on fame than I could rest on the broad results of such a system as I advocate. But, alas, my powers in this, as in most things, are far below my enthusiasm, and my appreciation of the great thoughts of other men. Thank God, great men, and men in power, see this matter in its true light, and have dared to countenance and sustain it—even against self-nominated legislators, who neglect our interests, and self-constituted manufacturers of public opinion, who under-rate or slight them.

Massachusetts has already commenced her system of agricultural education. And who has been, and is, among the leaders of this first successful movement? Our own president, Marshal P. Wilder. Here we have "precedent," if you require it, for what I have taken the liberty to urge upon scientific cultivators, though associated here as mere pomologists.

New York, ere five years, will have more than one agricultural college; and soon she will have one in every grand division of the State. The system is only delayed, not abandoned. And what member of this Congress is there from the empire State, who does not feel that he has done something towards creating "the public sentiment," that will cause this glorious consummation?

In Little Rhode Island, an old-fashioned "institution of learning"—one of the breed of colleges created by the monks, in the old world, to perpetuate their power, by hoarding knowledge within their walls, and spreading a pall of darkness and ignorance over every mind not "vowed" to them—BROWN UNIVERSITY—has declared that the son of the farmer must be educated, and the mechanic and civil engineer ought not to be compelled to load their brains with dead languages and old monkish lumber, in order to pick up a few crumbs of the sciences that occasionally fall from the desks of these hitherto exclusive dispensaries of "a liberal education."

FRANCIS WAYLAND must have his full share of the credit of this startling movement—though of course the men who lend the "sinews of war," are entitled to the lasting gratitude of the sons of labor, who are to reap the benefits of this unhopèd-for liberality.

One of the arguments used by President Wayland, to bring about this innovation, is truly characteristic, and shows the tact of the worthy President, and his knowledge of the calculating yankee. He not only convinces the board that the old system is unjust and devoid of practical utility, as well as opposed to the ideas of the age, but that it will *not pay*; that the concern must fail, if conducted in the middle of the 19th century, if not with the same objects, at least in the same manner, and with less actually accruing usefulness, than in the dark ages of monkish rule and christian barbarism.

That argument of "dollars and cents" was a good one, and doubtless had its weight, and why should we not use it, and show that a specific education for the farmers, would add millions to the wealth of the nation, for every thousand expended, while it gave a greater share to the producer?

I can not go the full length of the figures of my old friend Dr. LEE, in his Patent Office Report, and yet there is much truth in his statements, and *entire truthfulness* in most of

his deductions, however strange his arguments may appear, to one not used to this kind of demonstration.

"Westward the star of empire takes its way,"

and "the great west" has the greatest stake in agricultural and horticultural improvement; and, of course, in the first means to be used for the desired end—EDUCATION. 'Tis said that we do nothing by halves in the west. Let us neither *overdo*, nor *half do* this matter. Let us strike at once, and make the new west the school as well as the granary of the Old World.

Let us preserve the fertility of our soil, and increase the quantity of its products, instead of seeking a further west, where our little agricultural knowledge may give its usual returns to our hard labor, and which will, in the end, compel our children to yet another remove, when our improvident cultivation shall have left us no rich and virgin west within our present limits.

Then conquest must come to the aid of emigration, before the sure influence of our free institutions, and the irresistible force of our national character shall have had time and opportunity to prepare the southern portion of this continent for our certain advent.

If we do nothing now, towards preserving the fertility of the territory of our Union, in process of cultivation, or rapid settlement, our next "west" must be a southern one; and we must conquer or colonize to that end; and crowd the Spanish race, from the richest portions of this continent, as we have nearly done the Aborigines of the north.

This movement is inevitable, in the course of human events, and in its accomplishment, we can have few scruples, for they are but forcible and despicable intruders, or worthless crosses of other races, in the land from which we must, ere long, expel or extinguish them.

But, what all reflecting patriots deprecate in this immediate alternative, are the natural consequences of a warmer clime, of almost spontaneous production, and its peculiar concomitants in this case, on the character of our people, should they mingle too soon with this race, so every way inferior, and in whom virtue and knowledge, energy and enterprise, have long been but a name, or at best but a feeble and distorted reflection of their glorious past.

VEGETABLE PHYSIOLOGY—No. 4.

To conclude the subject of our last article, we will merely state that both animals and vegetables grow by interstitial deposits—minerals, on the contrary, by accretion. What I mean is, that the nutriment of both animals and vegetables is received into their organization internally, there to undergo certain changes, in order to fit it to become a portion of the vital organism. Minerals, on the contrary, increase by external additions, which undergo no change in becoming part of that to which they are added. A single particle of a mineral is a fair representative of the whole, but no portion of an animal or plant could be selected, by which we could form any adequate idea of it.

But if there are strong points of resemblance, there are also differences, in the higher grades of each. They are too apparent to dwell upon; but, as before hinted, in the lower, they are not so easily defined. There is a certain something denominated instinct, continually prompting animals to particular actions, (a reason independent of education, and incapable of progress,) unknown to merely vegetable life. The dove of the present, beyond doubt, builds its nest and tends its young just as did that which bore the olive branch to the ark of Noah—experience has taught them nothing. On the other hand, one of our Atlantic steamers would, I fancy, compare rather favorably with the floating menagerie of our great progenitor; the latter is reason—*progressive*; the former is instinct—*stationary*. This, though doubtless varying in degree, extends through all animal nature, from the lowest zoophyte up to man—at which point *reason* is superadded. Is it too great a stretch of the imagination to suppose that there may be in existence orders of intelligent beings as far elevated above man as he is above the

zoophyte—that there may be other and higher forms of intellect than even godlike reason? We may not be able to conceive what it could be, any more than we can imagine a sixth sense; but had we only four, the fifth would have been just as far beyond our comprehension as the sixth is now. There is another line of demarkation between animals and vegetables—the latter are almost universally composed of the three simple elements, carbon, hydrogen and oxygen; the former always contains, in addition to these, nitrogen, or azote; and to this is due the characteristic smell given out in burning, by the production of ammoniacal compounds. Again, animals and vegetables both consist of solid and fluid parts; but in the animal, the fluids greatly predominate; in the vegetable, the solid parts are in excess. One more idea, and we have done with this department of our subject. Animals are endowed with the power of voluntary motion; here we should be careful not to confound *spontaneous* motion with that which is really voluntary. The position of leaves to the sun; the expansion and closing of flowers, at certain times of the day, or in particular degrees of light or heat; the movements of the leaves of the mimosa sensitiva; are instances of spontaneous motion, but altogether of another character from the sensibility and mobility of the animal. The sponge is often instanced as an immovably fixed animal, but this is only one of the thousands of popular errors afloat on such subjects. This zoophyte is generated by what zoologists call gemmiferous reproduction; the newly cast off germ moves about until it finds some suitable position to attach itself; and having found such, with more judgment than characterizes many animals that rank higher in the world, it is satisfied to remain there, acting:

on the good old principle of letting *well enough alone*.

We shall now examine the composition of plants, and endeavor to show of what they consist; and as your periodical promises, by present indications, a somewhat extended existence, you must excuse me if I "*spin out*" a little on some points. This may possibly be one of them.

There are two classes of bodies in nature, one of them made up by the combination of two or more of the other. That class which has not been decomposed, is denominated by chemists *simple* or *elementary*. The other is, of course, compound. The bodies which have hitherto resisted all efforts at reduction amount to perhaps but fifty-five; of these, about fifty are usually classed as metals. These terms must, however, be viewed as more expressive of the present state of chemical knowledge, than as absolute. The only reason why Carbon, Oxygen, Hydrogen, or Nitrogen, are denominated simple undecomposed elements, is that they have never been resolved into simpler elements. The reader will at once see this to be a mere negation, and to lack every element of demonstration. At one time, carbonic acid gas was classed as elementary; it is now known to be an oxide of carbon; and future research may succeed in greatly reducing the number of simple bodies. The close analogy existing between Iodine, Bromine, and Chlorine, has led many chemists to suspect that they may contain a uniform basis, and consequently be all compounds. How wonderful the works of the Creator!! A few simple materials are wrought by the plastic hand of nature into all the innumerable forms of animal, vegetable and mineral being, by the operation of as few and as simple laws.

When we reflect upon the acknowledged fact, that all the multiplied thousands of

vegetable forms that crowd the globe, from the equator to the poles, are composed entirely of four bodies, namely: Carbon, Hydrogen, Oxygen, and Nitrogen—three of which are invisible, intangible gasses (just as much so as the air we breathe,) the fourth a solid—with the exception of a few metals, found in combination in small quantity in some particular families; and when we recollect the infinite forms of matter into which these four elements are woven; the variety in shape, in physical, chemical, medicinal and other qualities they assume; their importance to us as human beings, whether as sugar or cotton, wheat or flax; who can, for a moment, fail to see that omniscience is written on every thing. The more minutely we investigate the works of nature, the more we are compelled to wonder and admire. Who, from inspection, could ever imagine, that starch, sugar, and saw-dust, are not only composed of the same elements, but of these elements united in proportions so nearly alike as to puzzle the chemist to detect the difference in their mode of association. The idea of the possibility of converting rags into sugar, may be regarded as a mere chimera; yet nothing is easier. An old shirt lacks but a few atoms of one element, to render it fit to sweeten a cup of tea. The conversion of starch into sugar is an essential operation of nature, and an exceedingly important one, of which more hereafter.

In our next, we shall endeavor to give some description of the leading proportions of the bodies of which plants consist.

NOTICE.

THE reader will observe that this number of the Review is issued at an earlier period of the month than heretofore, and that the valuable Meteorological Table of John Lea is necessarily excluded. This was determined upon from the desire to gratify the subscribers with an early issue; and the Meteorology is considered more a matter of record than of news.—[Ed.]

THE CINCINNATI HORTICULTURAL SOCIETY

HAS had some very fine meetings, during the month; they were well attended by the members, who appeared gratified by the very interesting displays and discussions.

At the monthly meeting, on the 7th, one of the most important subjects under consideration was the Report of the Fruit Committee, embracing the Spring Exhibition, and the award of the \$100 premium for a seedling strawberry. After a free discussion, in which the merits of the case were argued, and the opinion was expressed that the Society should still wait another season, to test our many excellent seedlings, especially those known as McAvoy's No. 1, No. 12, No. 9, Extra Red, and Schneicke's Pistillate, and his Hermaphrodite, the Report was amended, and adopted, as follows; from which it appears that an important change is made in the nomenclature of two strawberries:

REPORT ON THE EXHIBITION OF FRUITS;
MAY, 1851.

CHERRIES.—M. McWilliams: Mayduke, fine and fair, good for any season; Elton, tolerably fair; Napoleon Bigareau—few specimens, the best on exhibition.

Mrs. S. Rintz:—Early Richmond; fair sample.

Mr. French, White Tartarian, small but fair.

APPLES.—J. E. Mottier: Rawle's Janet and Newtown Pippin, sound and perfect. In keeping and eating qualities, these two varieties may be considered as rivals; and, in productive qualities, the Janet carries the palm, as it seldom fails to produce a good crop.

M. S. Wade:—Swaar, sound and in good keeping; Jonathan, sound and handsome; Lady Apples, on branches.

STRAWBERRIES.—M. S. Wade: Hovey's Seedling—fair; McAvoy's Extra Red; Longworth's Prolific; Burr's New Pine; Burr's Seedling; Schneicke's Pistillate.

Jno. McFadden:—Neck Pine, very fine sample.

Mrs. French:—Hovey's Seedling, fair.

P. Outcalt:—Hovey's Seedling; Burr's Mammoth, fine; Taylor's Seedling, fine; McAvoy's No. 12, very fine specimens.

H. Ives:—Neck Pine, good sample; Keene's Seedling; La Grange, or Musk Hautbois, fine specimens, esteemed by many for its high musky flavor; hermaphrodite, not productive.

N. Longworth:—McAvoy's Seedling Pistillate, No. 1: large, prolific, bright scarlet: not high-flavored, but the handsomest dish on exhibition. McAvoy's Extra Red Seedling, Pistillate, large, beautiful, very prolific, quality medium, not high-flavored. Schneicke's Hermaphrodite Seedling; The committee propose the name of *Longworth's Prolific*, to be so called because N. Longworth gave the seed; the largest and most prolific Hermaphrodite Strawberry known to the committee, and equally prolific with any other variety; the plant is more hardy than the Hovey's, and recommended for general cultivation, after four years' trial. McAvoy's No. 12 Seedling we propose to call *McAvoy's Superior*; Pistillate, very prolific, large, dark-colored, high-flavored and luscious—a hardy plant; the specimens exhibited superior to Hovey's Seedling, or any other Strawberry that came under the examination of the committee, and is entitled to the premium of \$100, offered by this Society in 1847.

Schneicke's Pistillate, large, quality medium.

AWARDS.

Mr. Longworth is entitled to the Society's prize of \$3.00 for the best six varieties.

Mr. Resor:—Keene's Pistillate Seedling; Hovey's; Burr's New Pine, Seedling and Staminate, all fine flavored, but small; Mc-

Avoy's No. 9, medium size, acid; Taylor's Seedling, medium quality; Carter's Seedling, size medium, acid.

In consequence of the general destruction of fruits by frosts, the exhibition was quite limited.

MELANOTON S. WADE, M. McWILLIAMS, WM. ORANGE, JNO. G. ANTHONY, S. M. CARTER, STEPHEN MOSHER,	}	Comm'ee.
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On motion of George Graham, a copy of the Strawberry Award, contained in this report, was ordered to be presented to Mr. McAvoy, by the Secretary, duly signed by the officers of the Society.

It should be recollected that Hovey's Seedling is still assumed as the standard of good in flavor.

Strawberries were shown in this month, and the display from P. Outcalt, on the day of adopting the above report, were exceedingly opportune, and much admired; they afforded the members an opportunity to compare flavors afresh, and also to judge of the appearance, for they were fine, though late in the season. Among this collection were—Willey, Jenney, Hovey; Burr's Rival Hudson, Mammoth, and *New Pine*; Bush Alpine, Necked Pine, and Pistillate Keen, as well as the Number 12; and one "obstinate fellow" insisted that the *New Pine* was superior to all, in its flavor.

CHERRIES were shown on the 7th and 14th, in considerable quantities; some specimens were truly very fine, and their rarity added to the interest they always excite. They were chiefly from M. McWilliams, and F. G. Carey, and embraced the following varieties: Napoleon, Black Eagle, Yellow Spanish, Honey, Early May, Elton, May Duke, Honey Heart, Hyde's Red Heart, Black Tartarian, Early German, Carnation, Early Guigne, American Amber, White Bigarreau, Spar-

hawk's Honey, Ox Heart, Downer's Black' and others. Those presented by F. G. Carey were declared, by the Committee, to be the best exhibited this season.

To Dr. J. P. Kirtland, of Cleveland, the Society were indebted, on the 7th, for a basket of the Early Purple Guigne, which proves to be a delicious fruit, and identical with that shown, last year, as the "Early Meade," (procured from Columbus, O. ;) also, the Rockport Bigarreau," a magnificent cherry, of great beauty. It is delightful to be able thus to realize the charms of the "Lake Shore," in the way of their fruits.

APPLES appeared, and we have found which are the best keepers. Mr. Orange exhibited the Virginia Greening on the 21st, when it was perfectly sound, and was compared with the "Kingsley," a new seedling, sent by Dr. Moses Long, of Rochester, a small fruit, quite pretty, and of good flavor, brisk and juicy, but not considered *superior* by the Committee who examined it, and made the following report, which was adopted:

To the President and Members of the Cincinnati Horticultural Society:—We have examined the "Kingsley" Apple. Considering the condition in which it came to hand, we can not recommend it for flavor, but consider it a good keeper.

M. S. WADK, Ch'n.

M. McWILLIAMS,

W. ORANGE.

PEARS were placed upon the table, on the 14th, by M. McWilliams. The variety called Early Chaumontelle is very small, but quite pleasantly flavored, and very superior to the little Muscat, which is generally the first.

RASPBERRIES, have been coming in during the month, chiefly of the hardy varieties.

CURRENTS have made a very conspicuous portion of the display, at some of the recent meetings. They have been shown in quantity and variety, but the newest kinds have not yet been brought forward.

VEGETABLES have not attracted much attention during this month. Some very good cucumbers, the Black Spine, a seedling of Geo. Swanson, were considered the best. Fine Asparagus from Wm. Orange, Peas by A. H. Ernst, and Onions from Capt. Haycock, of Morrow, were noteworthy articles.

FLOWERS in some sort are always in season—among them, the Roses continue to attract much attention—S. M. Carter, M. McWilliams, W. Orange, P. Outcalt, M. Kelly and others, were among the most prominent exhibitors; the latter had some splendid displays of Remontants and other varieties, among which were many that were new and “distinct.”

Some Herbaceous plants have been shown, and among them were many cultivated wild flowers from W. Orange—a few of which were originally from the prairies of Illinois—some plants must be omnivagant, or at least almost as readily accommodative to a change of *locale* as MAN; in this case, the plants appear to be as completely naturalized and *at home*, in the stiff clay soil as once they were upon the rich, deep, alluvial of their native wilds.

The *Magnolia grandiflora* showed its pure, white flower, the attraction of the day—Pinks, Picotees, Dianthus, etc., made quite a display. The committee awarded the \$2,00 premium to Wm. Heaver for his stand of Picotees and Carnations, and gratuities to F. Schneicke and Henry Ives for their seedlings.

Mr. Heaver's plant of Ewing's Lantana was much admired.

INSECTS. R. Buchanan directed the attention of the members to some destructive insects found in his vineyard. He said they appeared to be a new enemy, as he had not found any person who was familiar with them. His remedy was *destruction*, the same cure he had so successfully applied to the caterpillars and curculios. He has a vessel pro-

vided with lime wash, into which the insects are shaken, this process has been so perseveringly applied that their numbers have materially decreased, at an expense of perhaps thirty dollars for his extensive vineyards. He exhibited grape leaves curiously eaten on their under surface by the insects; they resemble a curculio.

He also exhibited the insects, and with them another beetle which wounds the young shoots of the grape in such a way that they are easily broken off by the winds.

Mr. Buchanan also furnished the dead twigs of fruit trees that had been pierced by the locusts, and consequently broken off by the wind—they were full of eggs. This being a very prolific theme, there was a very interesting discussion. Dr. Mosher asked whether the female locust had been known to sing. One member observed that he believed that both members sang, but with a different note. Mr. Buchanan said he had not seen any come up where there had been no trees. Another member stated that he had good authority for the assertion that they emerged from the soil thirty rods from any tree or bush, in the midst of a field that had been cleared for many years, and from which the stumps had decayed. Mr. Ernst stated that he had found none in his grounds.

On motion, the insects presented by Mr. Buchanan were referred to the committee on insects, for investigation.

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Mr. Longworth presented the following communication which was referred to a committee to report at an early day upon the subject, which is justly considered of the greatest importance.

To the Members of the

Cincinnati Horticultural Society.

GENTLEMEN: I was gratified when called on to contribute the half of the premium of one hundred dollars, awarded to Mr. Mc-

Avoy for his Pistillate seedling. Our Fruit Committee properly delayed expressing their opinion, till they had for two seasons examined all our new seedlings, not only on exhibition in our Society, but in the gardens in the vicinity of the city, and made satisfactory comparisons with the numerous varieties cultivated by members of the Society. Not only McAvoy's prize seedling, but two other of our Pistillate seedlings, were of larger size than any exhibited. The new Hermaphrodite seedling did not come in competition for the premium, for the offer was confined to Pistillates. When I brought forward the resolution for a premium, I did not believe a plant could be raised, perfect in both organs, and bearing fruit of extra large size. I was of this opinion, for in England plants of this character are exclusively cultivated, and their celebrated Keen's seedling, Wilmot's Superb, and Swainstone, will not with us produce an average crop of one-fifth of perfect fruit. A large portion of the blossoms are wholly defective in Pistils, and do not even bear a defective berry. A large portion produces defective berries. Since it commenced bearing, the new Hermaphrodite has produced a full crop of perfect fruit. This season, on the same border with Hovey's seedling, and other varieties of extra large size, it bore the largest crop, and the average size of the fruit was larger than any other. If it shall continue to produce blossoms perfect in both organs, it will be the most valuable strawberry known.

But there is a subject of far greater importance than an improvement in the size and quality of the strawberry. Our region is destined to rival Europe in the manufacture of wine, if we devote our attention to the improvement of our Grapes, by raising new varieties from seed. If the Society will offer a premium, I will pay one-half—say a premium of from two hundred dollars to five

hundred dollars for a new seedling, hardy grape, superior in all respects, for the manufacture of wine, to the Catawba, equally productive, as hardy and vigorous of growth, and as great and certain a bearer. The Society to judge when they deem a new seedling of this character has been raised, when they shall select twelve judges of wine to test its quality in comparison with the Catawba, and a committee of twelve vine-dressers to judge of the character of the vine; and the decision of three-fourths of both committees to be necessary to justify the Society in awarding the premiums. I would also propose a premium of one or two hundred dollars for a hardy seedling table Grape, decidedly superior in all respects to any hardy table Grape now known to the Society, and the vine of vigorous growth, and a fair bearer, to be decided by the vote of a grape committee, to be appointed by the Society, to consist of twelve members, and the decision of three-fourths to be necessary, and the decision not to be made till they have had ample time to arrive at a correct decision. With the Shaker, Herbemont, Ohio, Catawba, and some others, the qualities of which are not yet fully tested, we may, from their seed alone, expect to raise new varieties, equal for the table to the best European. We may the more speedily accomplish this by a cross between our best natives and the best foreign table Grapes. I do not myself expect to be a competitor for the prize. I shall raise seedlings extensively, but propose to furnish them to my tenants, to plant in their vineyards and compete for the prize. I shall raise a few in my garden. If I offer one for the prize, and obtain it, I will present it to the Society, to be distributed for a superior new seedling.

Respectfully,

N. LONGWORTH.

CINCINNATI, June 18th, 1851.

WINE FAIR—AWARD OF PREMIUMS.

In pursuance to previous notice, a number of gentlemen assembled in St. Louis on Saturday, the 31st of May, for the purpose of examining the specimens of native wine submitted in competition for the premiums of \$100, offered by Alex. Kayser, Esq., for the best wine of the vintage of 1850.

Thirty-seven bottles of wine were exhibited, viz: 26 from Gasconade Co., 1 from St. Charles, 2 from Jefferson, 1 from Franklin, 1 from Warren, 1 from Moniteau and 4 from St. Louis. Several other specimens were presented which did not come within the terms of the competition.

The committee organized by the appointment of Thomas Allen, as Chairman. Thereupon the several samples of wine were submitted to the committee, six samples being submitted at one time, of which the committee selected one; and so, selecting one from each six samples, until the whole was examined. In this mode, six samples were selected as the best of the entire lot. The six which were thus selected by the committee as the best, are:

- No. 4 Produced by J. Rommel of Herman.
 " 12 " H. Rache, " "
 " 17 " E. Heck of Gasconade Co.
 " 20 " P. Weizenecker, of St. Louis,
 " 27 " F. Muench, of Warren.
 " 31 " Mrs. J. Senn, Gasconade.

The committee then proceeded to decide between the six thus selected. On the first ballot, there were in favor of No. 20 ten votes, and in favor of No. 27 five votes. No. 20 having received a majority of the whole committee was entitled to the premium. Mr. Weizenecker, to whom the premium was awarded, was called upon to explain to the meeting the circumstances under which his wine was produced. He stated that he resided near the city of St. Louis; that he produced last year about three hundred gal-

lons of wine of similar quality to that to which the premium is awarded; that it is the product of the Catawba grape exclusively. That the three hundred gallons of wine were the product of about one acre of vines, and that he considered his wine worth now about one dollar and seventy-five cents per gallon, but by retaining the same for a short time, it would improve in quality and be enhanced in value.

At the conclusion of Mr. Weizenecker's remarks, the Chairman of the Meeting delivered to him the premium of \$100, offered by Mr. Kayser.

There was submitted to the meeting a superior article of "Sparkling Catawba" wine made by William Glasgow, Jr., of St. Louis. But the committee were of the opinion that it was only natural wines of native growth which could compete for the premium, and believing that the Sparkling Catawba was not strictly of this character, they excluded it from competition. The committee, however, adopted a resolution highly complimentary of the "Sparkling Catawba" of Mr. Glasgow, as giving promise of superior excellence.

American Wine Growers' Association

HELD a regular meeting on Saturday, June 7th, Dr. Mosher in the Chair.

The minutes were read and approved.

The Committee on falsifications of Wine, appointed last month, reported progress and asked further time.

The President directed the attention of the Association to the necessity of procuring a standard of measure for the strength of wines, and introduced a Mr. Bennet, who on invitation stated that he was a maker of Hydrometers which would weigh to the thou-

sandth of a degree. Referred to the Committee for investigation.

Mr. Reh fuss presented a bottle of Catawba Wine to show the effect of neutralizing the tartaric acid by using ashes upon the soil.

Dr. Mosher expressed his belief that this wine had less acidity in consequence of the treatment.

Mr. Foote exhibited a bottle of Tuscan Wine, or *Vino Brusco*, sent by Vito Viti—said to be the simple juice of the grape—it was variously estimated. Some said it tasted of raspberries, some of black currants; some members declared that it was a good wine and thought it was pure.* Others thought that if that was the best wine they could make in Italy, it had been very much overrated.

The present prospect of the vineyards being asked for, Dr. Mosher stated that he

* Mr. Viti says it is pure, and fermented on the skins.

thought there was a prospect for one-half a crop, in his neighborhood.

Mr. Reh fuss moved that the next meeting be devoted to a statement of the vine prospect for this year, and the members were requested to investigate and prepare themselves to report.

A discussion upon the summer pruning resulted in the expression that care should be taken to leave plenty of foliage.

Mr. Reh fuss says he left four leaves beyond the bunches.

Dr. Mosher leaves two leaves for every bunch on the bearing branch.

One member asserted that laterals (or *geitzen*) "kites," should not be pulled out on the fruit bearing wood, but should be pinched in while soft. Dr. Mosher thought that the lateral, if left on, aided the maturing of the fruit and saved the fruit buds.

After a free discussion the Association adjourned to next monthly meeting.

THE CHERRY FESTIVAL: COLUMBUS HORTICULTURAL SOCIETY.

On Friday night the Editor received a Telegraphic dispatch from his highly valued friend, Prof. J. P. Kirtland, of Cleveland, which he has since learned was written in the top of his Elton Cherry tree, inviting him to attend a *Cherry Festival*, to be held in Columbus on Saturday evening. What was to be done! The morrow would bring its imperative duties, which must be attended to—but fortunately the conveniences of civilization ever keep pace with the wants of the civilized. The Saturday's duties are discharged and, without waiting for a dinner, (what business has an Editor with such a vulgar consideration?) the portmanteau is packed and the steps are directed to the Depot of the Little Miami Rail Road, that luxury of modern times which is ever ready

to accommodate any one who is inclined to locomotion, and to serve them too, infinitely better than the old mail stage coach arrangement. Now the splendid cars will in a few hours carry him easily over the space that formerly required a three days' passage, through mud, and mire, and corduroy. The beautiful country is rapidly passed over, its charms scarcely arresting the attention of any one not accustomed, as an Editor ever is, or should be, to observe its beauties—and before he is aware of it, he is more than a hundred miles from home, and is set down at "The American" or "The Neil House," and is soon investigating the landmarks of "Sugar Alley," and if possessed of good organs he will immediately espy the symptoms of a florid horticultural profusion, surrounded by in-

telligent cultivators, and interested as well as interesting women, vieing with one another, in admiration of the neat exhibition of fruits and flowers—to which such contributions have been made by Messrs. Kirtland and Elliott, as are seldom witnessed. To descend to sober earnest, such a display of cherries never met my eyes. I had seen large collections of this delicious fruit, and had thought that the numerous seedlings of Cleveland might perhaps embrace some new kinds of merit, but here indeed was an agreeable disappointment—*Cherries, Cherries*, more cherries—enough to satisfy all who were present—alas! for my poor little specimens of the “Kingsley apple” sent by Dr. Moses Long, from Rochester, and which I had proudly thought would figure in the exhibition, alas, it was scarcely noticed—ah, well a day, it had attracted some attention at the Cincinnati show in the morning.

But to return, this show of Cherries, for which a debt is due to Professor Kirtland, on account of his kind invitation, and also to Dr. Jones, President, in the name of his Society, for their voted welcome to partake in their investigations—it was a truly magnificent display—forty kinds were exhibited. I found, on entering the room at nine o'clock, P. M., the auction was occupying the attention of a very large party, but, nothing daunted, by crowds of men, and numbers of dames and damsels fair, I saw nothing but the *Cherries*, and devoted myself to them, thinking the time was passing, and the chances of investigation diminishing, but the members had set aside a number of plates for investigation, and at the close of the sale we descended to the minutia, examining each and saving the stones for future reference. A brief notice of some of the specimens is not only due to the successful grower and liberal exhibitors, but will be interesting to the reader; the results of the

investigation are herewith appended in a very brief way. Never has it been my good fortune to meet with so many and so good specimens of this delicious fruit—and F. R. Elliott, who brought them from Cleveland, deserves credit for his enterprise as well as for his familiar acquaintance with this as well as other branches of pomology.

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Kirtland's Mary—large, pale red, firm;—first quality—a very pretty cherry.

Governor Wood, new, a large round, pale red, sweet; first quality—a delicious cherry, one of the very best.

Virginia May Duke, small, heart-shaped, bright red, second rate

Rockport Bigarreau, large, handsome, bright red; first rate.

Davenport's Early Black, large, soft, black, sweet; very good.

Cleveland Bigarreau, large, bright red: first quality.

Louis Philippe, new, morello, large, dark red, tart, rich.

Gridley, small, dark; not ripe; second rate.

Downton, pale red, solid, rich; good.

Belle de Choisey, round, red, soft, rich; first rate.

Madison Bigarreau, medium size, bright red, soft, sweet; second rate.

Manning's Mottled Bigarreau, pale red; second rate.

China Bigarreau, small, pale red; poor.

Early White Heart, medium, pale red, sweet, firm, good.

Boyer's Early, medium, etc., as above.

Roberts' Red, “ these three are very similar and suspected to be the same.

Doctor, above medium, red, firm, rich, first quality.

June Duke, a tart variety of May Duke.

American Heart, not ripe.

Knight's Early Black, dark, rich, soft;

first quality, said to be a poor grower and poor bearer.

Black Heart; this cherry is smaller than it should be, and appears to be only a good Mazzard, but it is said to improve as it ripens, and to bear well.

English Amber, not nearly equal to its American namesake.

Swedish, these cherries satisfied me that the specimens shown by C. P. McIlvain at the Cincinnati Horticultural Society last year was a misnomer. I believe his is the Rockport Bigarreau.

Delicate, a new cherry, of a pale but bright and delicate color, size medium, quality good.

Elizabeth, above medium, bright color—flavor brisk—good.

Black Ox-heart, dark, and not large.

Several other cherries were exhibited, some of which are well known, the others were seedlings shown by numbers, and several of these were marked "rejected"—and several of those in the above list might with propriety, follow the same disposition, although there may be some redeeming qualities, such as great productiveness and hardiness.

The flowers upon the tables and the very enterprising and polite members around it, should not be passed by without a more especial notice, did the remaining space permit an extended description of their respective merits. The large baskets of fine Hovey's seedling, and Musk Hautbois strawberries, were very creditable, and served to remind one of the absence of a whole family of seedlings, which appear to be better known in other places than at home—Mr. Burr should look after his progeny.

THE FRONTISPIECE.

THE illustration selected for this number represents one of the best Rural Mansions in this part of the country. The residence of Mr. Cloon, three miles north of this city, was planned and erected by that modest and judicious architect, J. O. Sawyer, who has here produced a chef d'œuvre. The house is large, commodious, and most accommodative. It is fitted up with every luxury and convenience. The style of the exterior may be learned from the picture. No ground plan of the subdivisions was prepared, and a meager description must suffice. A large entry, with the stair-way, divides the main building; on one side, the ground floor contains two large rooms, eighteen feet square, the living and dining apartments—on the other side, is a handsome saloon or parlor, of an oblong shape, occupying most of that division.

On the second floor there are four large rooms, with dressing closets, and a smaller chamber, over the front door, which would be a charming library, all opening upon the upper hall, besides a very nice room in the back building; and the back stair-way and baths, etc., with another room over the kitchen.

The third floor, or attic, is large enough, and amply commodious, for a family of moderate views, containing four good chambers, a store room, and, over the back building, a large drying room, and tanks that furnish every chamber, and the offices below, with an abundant supply of hot and cold water. But returning to the ground floor of the back building, there will be found a roomy kitchen and laundry, with every convenience of permanent tubs, hydrants, cooking range, and all the et ceteras which the most fastidious housekeeper could desire, beside all imagin-

able closets for china, stores, linen, umbrellas, etc., adjoining or between it and the dining room.

This is altogether the most complete, in the arrangement of its details, of all the houses in our neighborhood, and reflects great credit upon those who planned it, and those under whose direction it was executed.

The situation,—upon a large, grassy lawn, of undulating surface, sloping toward the road, from which it is sufficiently distant, and from which it is partially hidden by judiciously arranged masses of trees,—is every thing that could be desired. Then, again, "CLINTON FARM" is well stocked with those enliveners of the rural landscape, beautiful cattle, in the rearing of which the proprietor has taken so deep an interest, and has been rewarded with such good success, as to place him in the front rank of Breeders. When these admirable animals are grazing on the

gentle slopes of Clinton Farm, they constitute a feature that is very attractive. It is a source of regret to me, however, that the proprietor intends offering his whole herd for sale, on the 15th of July, although an excellent opportunity will be afforded to those who admire perfect animals, of this species, to add to their collections, as these embrace some of the purest bloods: They are of different importations of the Durham Short-horns. As Mr. Cloon is anxious to diminish his cares, he is also willing to curtail the extent of his farm, by selling some portions for building sites, for which purpose much of his land is admirably suited. So that we may expect, in a few years, to see a delightful rural village springing up around him; and Clinton Farm will have to yield to "*Clinton Center*," or some other epithet, which the taste of the future occupants may designate for the result of their enterprize.

ACKNOWLEDGMENTS.

THE apples called Kingsley, from Dr. Moses Long, came in good order considering the hot weather—they were beautifully packed. The specimens were presented to the Horticultural Society, and the report of the fruit committee will be found on another page. Mr. Ernst has some specimens on trial. The editor is disposed to deal more leniently with it than the committee, always reserving a saving clause, however—as it is new, and we need more knowledge of its properties when grown with us; a few buds would soon enable us to test this point upon some experimental trees. In the mean time the reader is referred to the accompanying document:

Rochester, June 12th, 1851.

GENTLEMEN: At the instance of Messrs. Joseph Alloyd and others, I forward some specimens of the "*Kingsley Apples*," which

were taken from a seedling apple tree in a neighboring town, and which accidentally came to my knowledge five or six years since.

I introduced the fruit to public notice two years ago, through a committee of the North American Pomological Convention, held at Syracuse, N. Y., September 14th, 1850.

My object in forwarding this fruit for examination by yourselves and those with whom you are associated in matters of this kind, is simply to obtain your opinion as to the value of the fruit for general cultivation, taking into account the rare combination of good qualities, as that of vigorous and thrifty growth of scions taken from it, its being a good biennial bearer, great keeper, etc. Its size is susceptible of great improvement by cultivation.

The tree from which this fruit was taken

is the only bearing tree known, except a graft that produced a few apples last season; those would compare as to size with a medium sized Westfield Seek-no-further.

I am informed that you are associated with others who are prosecuting their inquiries to considerable extent in the Pomological department of Horticulture.

I should be glad to receive a return from you when it may suit your convenience.

Very respectfully,

your obedient servant,

MOSES LONG.

DR. J. A. WARDER, and
MR. A. H. ERNST.

To Mr. Charles Fox, temporary editor of the Michigan Farmer, thanks are due for the *Camelina sativa* seeds, which shall have a chance to try our climate and soil. He says of it:

*Grosse Isle, Wayne Co., Michigan, }
June 18, 1851. }*

DEAR SIR: In looking over the last Western Horticultural Review, which you send to my friend Rev. M. H. Hunter, of this place, I see a long article on the *Camelina sativa*. Three years ago I received a pint of it, among other seeds, from the London seed store, of the Royal Agricultural Society, England, and have grown it in my garden. It is a very pretty and striking ornamental flower, of a peculiar and unusual orange color. I sowed it first in a clayey border, near the house, in the spring of 1850. The season was unusually dry, and the plant did not flower till July, when it was covered with blossoms till the frost came; yet the earlier seeds fully ripened. Through winter it appeared to be dead, and I supposed it to be an annual, but left it standing to try it. It blossomed, however, again, at the end of March this season, the first blossom I had after the crocuses, and it is still in blossom, though apparently near its departure. It is covered with seed pods. Last winter was very severe on all plants, and there can be no doubt of the hardiness of the Gold of Pleasure. It will, I am sure, prove an acquisition to the flower garden, but

I am doubtful of its agricultural value in this country. As it grows on thin upright stems, about eighteen inches high, with but little leaf, it would scarcely cover the ground sufficiently to keep down weeds, unless unusually clean land, and frequent hoeing were employed. As I am probably the only person in the West who has the seed, I have much pleasure in sending you a little.

As assistant Editor of the Michigan Farmer, during Mr. Isham's visit to Europe, I prepared for last month, a notice of your work, with which I am very greatly pleased. If you have enough seed, please let Mr. N. Longworth, an old friend of mine, have a little, if he feels an interest in it. I still have nearly half of what I got originally, and if you think it worth while to introduce it generally, I beg you to consider it at your service, if you will tell me how to forward it.

I am, very respectfully, yours,

CHARLES FOX.

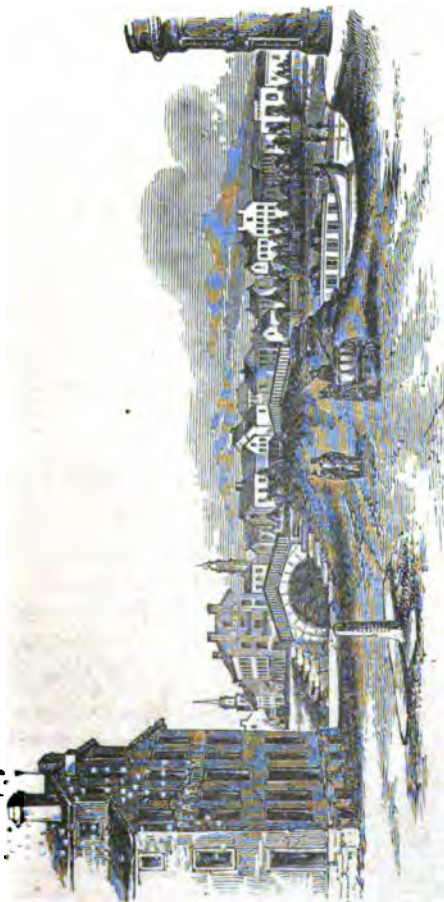
To the Columbus Horticultural Society, the Editor feels under a great obligation for their handsome reception on Saturday evening, June 21st, which was enough to make a plain man vain, and a conscientious man grateful.

CORRECTION.

In the list of awards granted at the Spring Exhibition, and printed on page 448 in the ninth number, an error escaped the editor, supposing the "copy" was correct, as it came with the authority of the Committee. Under the section of Bouquets, the first premium of "three dollars, for the best pair of hand," appears to have been awarded to the Misses Jackson, when it should have been to our young friends, "John and Isaac Jackson," whose nosegays were decidedly neat and pretty, and were an improvement upon their former productions of the same kind. To their sisters a gratuity was given for very pretty bouquets of a larger size. These annoying mistakes will sometimes occur.

MORGAN & OVEREND, PRINTERS.

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THIRD STREET CANAL BRIDGE, DAYTON.



Vol. I.

AUGUST, 1851.

No. 11.

STUDY THE BEAUTIFUL IN NATURE.

EVERYTHING connected with the rural arts and their materials, contains or should contain the elements of Beauty, and he who does not appreciate this truth, is no true workman: nor can he expect to succeed in his undertakings if he obstinately overlook this proposition, for upon his proper and just appreciation of it will depend the happy result of his efforts, whether in the laying out of a park or lawn, planting and adorning it, or even in the location of a garden walk and its accompanying flower beds. Still further, even in the arrangement of a bunch of flowers, the man who has not cultivated a taste and knowledge of the beautiful in nature, will not succeed in making a happy combination of the elements before him, although the result of his efforts may be most *artistic*, and in the eyes of some faultless in its finish.

Let us then study the BEAUTIFUL. "Where shall we seek and find it," do you ask? I reply, where is it not? 'Tis every where—each flower and shrub and tree contains the elements of beauty, would we but see them there, and oft-times more happily combined than could have been imagined by the mind of man. The whole scope of *animated* nature, bird, beast, fish, insect, shell, affords us innumerable examples whence to cull our illustrations.

The earth itself furnishes a rich mine of the beautiful, in its varied development of *form*—the hills and vales, the mountain peaks and serried ranges or continuous swells, embracing the sequestered and sheltered valleys and separating or upheaving broad plains, with here and there the winding rivers in their devious courses, all are favorite illustrations. So that even in the study of so dry and unpromising a pursuit as topography, we are surrounded by numerous objects that through this element claim our attention.

But these varying forms of the earth's surface, while they please the active fancy, also lead to useful results. The geologist, even in the midst of winter, when all nature is hushed in the sleep of frost, by simply observing the *forms* of the headlands and plains that come under review as he travels along, is enabled to tell us what classes of rocks constitute the staple of the formations over which he is passing, and he will thence draw the most valuable deductions respecting the economic capabilities of the country, whether from its mineralogical resources or its agricultural riches. Here, too, may be found the abundant charms and untold wonders of the great laboratory of nature, where order reigns supreme in all the beauty of

harmony. The chemist will explain the properties of the soil beneath our feet, and direct the most desirable and profitable crops to be planted in each locality, and the appropriate additions that must be made to each, to render it most productive of the perfect and most fully developed forms of the vegetation that are to be expected. The wondrous beauty of the definite proportions and perfect forms, that are to be found in these investigations cannot be duly appreciated except by one who has been favored with an insight into the glorious arcana, the threshold to which only, man has yet reached; but even here, our love for the beautiful will bring us to the door, and to our earnest knockings and inquiries, comes back the most instructive answer—thus if we analyze a few grains of soil and also of the products we wish to receive from it, we at once learn whether or not our efforts in their production can be crowned with success.

Looking higher and above the earth, what endless forms of beauty, ever changing ever new, meet our gaze at each turn, in the forms, complications and the wonderfully beneficent arrangements of the atmosphere about us. The clouds are masses of *Beauty*, and might equally attract the attention of the poet and the philosopher. Indeed they have done so, and the most successful delineators and expounders of their mysteries have really belonged to both classes of study. The meteorological effects of sun-rise, noon, sun-set, dews and rains, and the whole train of the phenomena of day and night, are of the utmost importance to our race, and furnish study for the philosopher, and constant themes to the poet, whether him who delineates in rhythm or him who portrays the harmonies in the silent and unspeakable though eloquent language of the canvas. No painter can hope to succeed in his labors if he fail in his sky.

While looking upward to the beautiful

clouds, it is impossible not to allow the sight to extend beyond the narrow verge of meteorology. The glorious orbs of the starry firmament, beautiful insignia of order and permanence, as well as of design and power, cannot fail to attract our attention, and lead us to the most expanded ideas of the greatness, power and wisdom of the Creator.

How purifying and elevating are these reflections which force themselves upon us when we yield to the seductive charms of natural beauty every where around us! How can we avoid tracing the connections, and drawing the irresistible inferences, that most naturally flow upon us as we observe the harmonious beauty of nature's chain of existence, tracing from the inorganic to the organic, and from the lowest to the highest orders, until we at last meet with a chasm, beyond which we are impelled to look, vainly attempting to cross it in our anxious struggle, having pursued the series from mite to man, and from ourselves looking toward the Highest, the Creator, in whom we feel satisfied is all goodness and beauty,

Thus allowing the mind to be fed by the sensations, with the most lovely images of the pure and the beautiful, we fortify ourselves in a great degree against the evil propensities in our nature, toward which all are so prone. In this way we enable our erring spirits to repel the approaches of evil, with a greater probability of success, for alas! are we not all prone to ill? and what can we do with our poor *human nature*; how can we unaided resist the tendency to evil? In the words of a time-honored bard, so fondly quoted by a later poet of nature, amid Scotia's hills, "Unless above himself he can erect himself, how *poor* a thing is man!"

Having allowed the fancy to speculate a little upon these tendencies of our nature, the dark and the bright are both pointed out—the latter is presented as ever before us if we

but open our eyes to see it. Everything has **BEAUTY**—seek it, evolve it!—No matter how common-place the subject, it abounds in the true elements of the divine, having been created by Infinite Wisdom—it must, therefore, yield rich fruits of infinite beauty if properly investigated.

These random thoughts have been forcibly called up by a recent escape from the turmoil and bustle of city life, where, shut out from nature, its beauty can only live in one's dreams; and the recollections of the kind teachings of devoted parents, who in the early years of tender infancy, had directed the inquiring mind to the study of the *Beautiful in Nature*, now well up in the affections of the heart, bringing with them the hidden treasures

long stored away, and which sometimes, like old rubbish, have lain in us almost forgotten, but not lost forever.

Oh, then, allow me to urge upon you all, who may have pursued this deviation from the regular outline, into the by-paths, away from the graveled walks of Horticulture, allow me to urge you to cultivate in your children a similar admiration for the works of the Creator—how simple soever and common-place, they are possessed of the most attractive qualities, and are sources of untold happiness as well as safety from evil, for our offspring; let us take pains to *direct* and *encourage*, instead of thwarting and repelling the *Love of the Beautiful in Nature* which is the *natural* inheritance of childhood.

MANURING AND IRRIGATION AMONG THE CHINESE.

THE following extracts relate to some of the doings of a very wonderful people, who, without science are not ignorant, and from whom we, in this enlightened age and country, may learn many useful hints. We may write and talk about chemical manure, the value of irrigation, etc., but they perseveringly and successfully practice the principles we advocate, and have long done so.

Mr. Fortune is well known as the indefatigable botanical collector of the London Horticultural Society. He has spent several years among the celestials, from whom he has sent home to England some beautiful plants that we already cultivate and appreciate here, in the center of the Western Hemisphere.

Though not strictly Horticultural, yet as the farms of China are small and more like gardens, many useful hints may be gathered from their practices, especially in manuring, that can be made available in our gardens: and the editor of the *Working Farmer* is

thanked for the copy—he does not inform his readers whence he procured the “extracts.”

ED. REVIEW.

Every agricultural operation in China is done with the greatest regularity, at certain stated times which experience has proved to be the best; and in nothing is this more apparent than in the manuring of the cotton fields. Early in April the agricultural laborers, all over the country, are seen busily employed in clearing the numerous canals, ponds and ditches; and the mud thus obtained—which has been formed by the decay of long grass, reeds, and succulent water-plants, and partly by the surface soil, which has been washed down from the higher grounds by the rains—is conveyed away, and spread over the cotton fields. Road-side scrapings and burnt rubbish are saved up for the same purpose. Previous to this manuring, the soil has either been plowed by the small buffalo-plow in common use in the country, and then broken and pulverised by the three pronged hoe, or, in those instances where the farms are small, and can not boast of a buffalo, it is loosened and broken up entirely by manual labor. In the end of April and

beginning of May, the cotton seeds are carried in baskets to the fields, and sown generally broadcast, but sometimes in drills or patches. The fields are carefully tended during growth: the plants are thinned where they have been sown too thickly, the earth is loosened amongst the roots, and the ground hoed and kept clean from weeds. The cotton-plant produces its flowers in succession from August to the end of October; and as the pods are bursting every day, it is necessary to have them gathered with great regularity, otherwise they fall upon the ground, and the cotton gets dirty, which of course lowers its value in the market. At this season, accordingly, little bands of Chinese are seen in the afternoon in every field, gathering the ripe cotton, and carrying it home to the farm-yard, where it is spread out to the sun on hurdles, but is always taken under cover at night. When perfectly dry, it is separated from the seeds by the well-known wheel with two rollers, which, when turned round, draws or sucks in the cotton and rejects the seeds. "It is a simple and beautiful contrivance," says Mr. Fortune, "and answers well the end for which it is designed." The cotton is now ready for market,—and early in the fine autumnal mornings, the roads leading into Shanghai (the emporium of the district) are crowded with bands of coolies or small farmers, from the cotton farms, each with his bamboo across his shoulders, and a large sack of cotton swung from each end. These coolies—many of whom bring their own produce to market—are very independent in their dealings: should the price offered by the merchant be below the owner's expectation, he immediately shoulders his load and walks off to a rival warehouse; and a similar independence characterizes the peasant farmers in all their other dealings. "Before the cotton is converted into thread for the purpose of weaving, it is cleaned and freed from knots by a process common also in our Indian possessions—viz: by an elastic bow, the string of which is passed under a portion of the cotton placed on a table, throws it into the air by the vibration which is kept up by the workmen, and separates the fiber without at all breaking or injuring it; at the same time the wind caused by the sudden vibration carries off the dust and other impurities. After this process the Chinese cotton is par-

ticularly pure and soft, and is considered by good judges not to be surpassed by any in the world." Every small farmer or cottager reserves a portion of his cotton produce for the wants of his own family; and this is cleaned, spun, and woven by the female members, sometimes assisted by the old men or young boys who are unfit for the labors of the field. In every cottage throughout the cotton district the traveler meets with the spinning wheel and the small handloom, which used to be common in our own country in former times, but which have now given way to machinery. Where the families are numerous and industrious, a surplus of cloth is thus woven; in which case it is sold at the adjacent towns, and money is thence realized for the purchase of tea and other necessities which were not produced in this particular district.

With the usual providence of the Chinese every part of the cotton crop is turned to account. The cotton itself clothes them, and affords them the means of supplying them with all the necessities of life; the stalks boil their frugal meals; and the ashes even—the remains of all—are strewed over their fields for the purpose of manure. Moreover, as they always extract two, and sometimes three, crops from the soil in the course of the year, they have adopted the plan of sowing or planting fresh crops before the removal of those which occupy the ground. "Wheat, for example, which is a winter crop, is reaped in the Shanghai district generally about the end of May, while the proper time for putting in cotton seed is the beginning of that month or the end of April. In order, therefore, to have cotton on the wheat land, the Chinese sow its seeds at the usual time amongst the wheat; and when the latter is reaped, the former is several inches above ground, and ready to grow with vigor when it is more fully exposed to the air." In like manner, clover, beans, and other vegetables are frequently above ground in the cotton fields before the stalks of the latter are removed. Thus the Chinese, in the northern provinces, lengthen by every means in their power, the period of their growth, and gain as much as they possibly can from the fertility of their land. The reader must bear in mind, however, that the soil of this district is a rich deep loam, which is able to yield

many crops in succession, without the aid of a particle of manure, while the climate is capable of bringing to perfection many of the productions of the tropics, as well as all those indigenous to the temperate regions of the globe.

Notwithstanding the fertility of much of their soil, there is no nation that equals the Chinese in the diligent collection and application of manure. Of the chemical manures which science has recently introduced into western Europe, they know nothing; but they make the most of what they have, and in the eager collection of the night-soil, they even beat the Dutch! In all their towns, large cisterns or earthen tubs are placed in the most conspicuous and convenient places for the reception of this kind of manure; and what would be considered an intolerable nuisance in Europe, is there looked upon by all classes, rich and poor, with the utmost complacency. Almost every Chinese town is permeated by canals; and, on these, long clumsy boats are placed in different districts of the town, into which the night-soil and urine are emptied, and conveyed from thence to the country. This manure is sometimes used after fermentation, but frequently not. In the fertile agricultural districts of the north, this stimulant is used in a fresh state, being of course sufficiently diluted with water before it is applied to the crops. And there can be little doubt that in this the Chinese are perfectly right; as the manure must be much more efficient in this state than when a great portion of the ammonia has passed off into the air. A strong stimulant like this would probably in ordinary circumstances have an injurious effect; but as it is used only when the crops are young and luxuriant, they are then able to assimilate its gasses, and a most marked effect is produced upon their growth and productiveness. This kind of liquid-manure is generally applied to wheat, barley, and all the cabbage tribe and other garden vegetables; but not to rice, which is always flooded during its growth.

For rice the manures are manifold, but necessarily they are always applied at or before sowing. As, from scarcity of fire-wood in China, a great portion of the straw, cotton stalks, and grass, which would go to manuring the fields is used for firing, necessity has forced upon farmers the plan of *growing*

manures. In the island of Chusan, and over all the rice country of Chekiang and Kiang-soo, two plants are cultivated during winter almost exclusively for manure: the one is a species of Coronilla, the other is Trefoil or clover. They are sown in ridges in autumn, and grow luxuriantly till April, when it is necessary to prepare the ground for rice. The ridges are then scattered in a fresh state over the surface of the ground; the fields are next flooded, the plow and harrow are employed, and the manure, thus half buried amongst mud and water, begins to decay immediately, and gives out a most disagreeable putrid smell. This mode of manuring is generally practiced in all the rice lands in this part of China, and the young paddy doubtless derives strong nourishment from the ammonia given out in the decomposition of this fresh manure. The Chinese farmer is not a chemist; he knows little of vegetable physiology; but his forefathers have hit accidentally upon certain systems which are found in practice to succeed, and to these he himself adheres, and hands them down unchanged to his children.

When the first crop of rice is cut, the second, which has been planted in the alternate rows, is left to grow and ripen in the autumn; the ground is stirred up; and the stubble and part of the straw of the first crop is immediately worked up with the mud and water between the rows: this decays in the same manner as the trefoil in the spring, and affords manure to the second crop. Prawns and fish are frequently used for the same purpose and in the same way.

Burnt earth mixed with decomposed vegetable matter is another highly esteemed manure, and is common in all the agricultural districts. During the summer months, all sorts of vegetable rubbish are collected in heaps by the road side, and mixed with straw, grass, parings of turf, etc., which are set on fire and burnt slowly for several days, until all the rank vegetable matter is decomposed, and the whole reduced to a rich black earth. It is then turned over several times, when it presents the same appearance as the vegetable mold used in gardens in England. This manure is not scattered over the land, but reserved for covering the seeds, and is applied in the following manner. When the seedtime arrives, one man makes the holes,

another follows and drops in the seed, and a third puts a handful of the black earth on the top of them. Being principally vegetable mold, it keeps the seed loose and moist during the period of germination, and afterwards affords them nourishment. This manure is useful mechanically as well as chemically in a stiff soil like that of the low lands of China, where the seeds are apt to be injured in the process of germination. The young crop thus planted acquires a vigor in its first growth, which enables it to assimilate the matter which forms the strong stiff soil, and to strike its roots firmly into it.

Oil-cake also (manufactured from the seeds of a certain kind of cabbage, and some other oleaginous plants) is broken in pieces and scattered broadcast over the land, or applied in the same manner as the vegetable earth; while bones, shells, old lime, soot, ashes, and all kinds of rubbish, are also eagerly bought up by the farmer. From this imperfect summary it will be seen how little we are ahead of the Celestials in the kinds of our manures, and how much we are behind them in the diligent collection of fertilizing matter. Indeed, there appears to be less waste of fertilizing matter in China than in any country in the world.

* * * * *

The following are Mr. Fortune's remarks on the interesting subject of the terrace cultivation and irrigation of the Chinese:—

The terrace cultivation of China has been noticed by nearly all writers upon this country, and, like most other subjects, it has been either much exaggerated or undervalued. It appeared to me to be carried to the greatest perfection on the hill-sides adjacent to the river Min near Foo-chow-foo; at least I was more struck with it there than anywhere else. On sailing up that beautiful river, these terraces look like steps in the sides of the mountains—one rising above another, until they sometimes reach six or eight hundred feet above the level of the sea. When the rice and other crops are young, these terraces are clothed in luxuriant green, and look like a collection of gardens among the rugged and barren mountains. The terrace system is adopted by the Chinese, either for the purpose of supplying the hill-sides with water where paddy [rice] is to be grown, or to prevent the heavy rains washing down the

loose soil from the roots of other vegetables. Hence these cuttings are seen all over the sides of the hills, not exactly level like the rice terraces, but level enough to answer the purpose of checking the rains in their descent down the mountain. For the same reason, the sweet potato and other crops which are grown on the hills are always planted in ridges which run cross ways or horizontally; for were the ridges made in a different direction, the heavy rains which fall in the early summer months would carry both the loose soil and crops down into the plains.

Rice is grown on the lower terrace-ground, and a stream of water is always led from some ravine and made to flow across the sides of the hills, until it reaches the highest [rice] terrace, into which it flows and floods the whole of the level space. When the water rises three or four inches in height, which is sufficiently high for the rice, it finds vent at an opening made for the purpose in the bank, through which it flows into the terrace below, which it floods in the same manner, and so on to the lowest. In this way the whole of the rice terraces are kept continually flooded, until the stalks of the crops assume a yellow ripening hue, when the water being no longer required, it is turned back into its natural channel, or led to a different part of the hill for the nourishment of other crops. These mountain streams which abound in all parts of the hilly districts, are of the greatest importance to the farmer; and as they generally spring from a high elevation in the ravines, they can be conducted at pleasure over all the lower parts of the hills. No operation in agriculture gives him and his laborers more pleasure than leading these streams of water from one place to another, and making them subservient to his purposes. In my travels in the country the inhabitants often called my attention to this branch of their operations; and I pleased them much when I expressed admiration at the skill with which they executed it. This practice is not confined to the paddy grounds; for I remember once, when superintending the planting of some large trees and shrubs in the gardens of Messrs. Dent & Co. in Hongkong, after I had given them a large supply of water at the time they were planted I desired the gardener to repeat the dose next morning. But, on the following day, when I

returned to the spot, I was surprised to find a little stream divided into many branches, meandering among the roots of the newly planted trees. As there was no stream there before, I went up to examine its source, and found that it had been lead from a neighboring ravine; a work more easy than carrying a large supply of water in buckets, and at the same time more effectual.

* * * * *

Moreover, demand is the great parent of invention; and we generally find that the higher kinds of machinery, which require large capital to work them, never make their appearance until after that capital has been accumulated. Now, in China there is little money available for agricultural machinery, for farms are unusually small, and their owners' capital trifling; and from the absence of the law of primogeniture, large fortunes seldom survive a single generation. Nevertheless, if large fortunes be absent, so also is real want. Agriculture is not a pursuit that tends to accumulate great wealth in the hands of individuals; but it is more steady in its profits than the pursuits of commerce, and regarded as a national occupation, its tendency is to keep a larger population in healthy and comfortable circumstances than any other branch of industry. Hence there is no country in the world where the proverb "Money begets money, and poverty begets poverty," can be less applicable than in China.

* * * * *

The Chinese are a flower loving nation. The Mandarins and higher classes take great pride in their gardens; floral ornaments are in demand on all festival occasions, and the trade in them is considerable—some beautiful plants, which grow only in the north, such as the tree pæony, being brought several hundred miles by sea to the market of Canton. The ladies of Foo-Chow-foo are particularly fond of flowers—artificial as well as natural—for the decoration of their hair. The rustic beauty employs the more large and gaudy, such as the red hibiscus; while the refined damsels prefer the jasmine, tuberose, and others of that description; and artificial flowers are in still greater request. It is at New-Year that the national predilection for flowers is most conspicuous. Mr. Fortune, who witnessed the festivities during this

season at Canton, says, that not only are the houses and temples decorated with them, but the thousand boats on the river also come in for a most extensive share. Indeed these "flower-boats," as they are called, are only floating-houses—for a very great part of the population of Canton live upon the river; and at all seasons plants and flowers are to be seen blooming on their high sterns, or in their little parlors where their families congregate. "In going up the river at New-Year time," says Mr. Fortune, "towards the Fa-tee Gardens, I met boats in great numbers, loaded with branches of pear and palm-trees in bloom, Eukianthus, Camellias, Cockscorns, Magnolias, and various other plants which flower at this season."* The branches of the Eukianthus are brought down from the hills with the buds just expanding, and on being placed in water, they very soon bloom in the houses, and remain for more than a fortnight as fresh and beautiful as if they had been taken up with their roots in the most careful manner. The common Jonquill, too, comes in for a large share of patronage; and in the streets of Canton one meets with thousands of bulbs growing in small pans among water and a few white stones. In this case the Chinese exhibit their peculiar propensity for dwarf and monstrous growth, by planting the bulbs upside down, and making the plants assume curious twisted forms, which appear to be so agreeable to the eye of a Chinaman. Large quantities of all the above mentioned flowers are exposed for sale in many of the shops and at the corners of the streets in Canton, where they seem to be eagerly bought by the Chinese. At the New-Year season, parties are made, to go to the gardens at Fee-tee, some three miles above Canton, and on particular days you find there hundreds of "flower-boats," crowded with young Chinese of the better classes, enjoying themselves as our own population do at Richmond or Hampton Court. These celebrated Fee-tee gardens (or the "Flowery Land," as the name implies) are about a dozen in number, and in spring they present a gorgeous appearance. "They are then gay with the Tree-pæony, Azaleas, Camellias, Roses, and various other

* The Chinese year begins about the middle of February.

plants. "The Azaleas are splendid," says Mr. Fortune, "and reminded me of the exhibitions of the Horticultural Society at Chiswick, but the Fa-tee exhibitions were on a much larger scale. Every garden was one mass of bloom; and the different colors of red, white, and purple, blended together, had a most beautiful and imposing effect." Dwarf trees, trained into the most grotesque and curious forms, occupy a principal place in these gardens, as also chrysanthemums—a pet flower with Chinese gardeners, and which they manage extremely well, perhaps better than they do any other plant.

Ornamental gardening has long been cultivated among the Chinese, and the following is a specimen of it, which Mr. Fortune saw on visiting a retired Mandarin at Ningpo:—

Both his house and garden are unique in their way, but they are most difficult to describe, and must be seen to be appreciated. In this part of the country the building of artificial rockery is so well understood that the resemblance to nature is perfect, and it forms a principal feature in every garden. This old gentleman has the different parts of his house joined together by rude looking caverns, and what at first sight appears to be a subterraneous passage, leading from room to room, through which the visitor passes to the garden, which lies behind the house. The small courts, of which a glimpse is caught in passing through, are fitted up with this rock-work; dwarf-trees are planted here and there in various places, and creepers hang down naturally and gracefully, until their ends touch the little ponds of water which are always placed in front of the rock-work. These small places being passed, we are again led through passages like those already noticed; when the garden, with its dwarf trees, vase, rock-work, ornamental windows, and beautiful flowering shrubs, is suddenly opened to the view. It must be understood, however, that all which I have now described is very limited in extent; but the most is made of it by windings and glimpses through rock-work, and arches in the walls, as well as by hiding the boundary with a mass of shrubs and trees.

The dwarfed trees of China are a curious example of the patience and ingenuity of this people. "Some of the specimens are only a few inches high, and yet seem hoary with age.

Not only are they trained to represent old trees in miniature, but some are made to resemble the fashionable pagodas of the country, and others different kinds of animals, among which the deer seems to be the favorite. Junipers are generally chosen for the latter purpose, as they can be the more readily bent into the desired form; the eyes and tongue are added afterward, and the representation altogether is really good." The pretty little plant, *Lycopodium*, which often naturally takes the very form of a dwarf-tree in miniature, is a great favorite with Chinese gardeners; and on Mr. Fortune once asking them the cause of their admiration—"Oh!" they exclaimed in Canton English—oh! he too muchia handsome! He grow only a leete and a leete every year; and suppose he be one hundred year oula, he only so high,"—holding up their hands an inch or two higher than the plant. The process of dwarfing is mainly founded on the principle that any thing which stints the formation of the sap, or retards its free circulation, also impedes the formation of wood and leaves. But the first step in the process is said to be, to select the very smallest seeds from the smallest plants; next, the seedlings (or cuttings) are put into pots narrow and shallow, and get no more water than what barely suffices to keep them alive. While the branches are forming, they are tied down and twisted in various ways: the points of the leaders and strong growing ones are generally nipped out: and every means taken to discourage the productions of young shoots of any degree of vigor. Sometimes, as in the case of peach or plum trees, which are often thus dwarfed, the plants are thrown into a flowering state; and then, as they flower freely year after year, they have little inclination to make vigorous growth. Whatever may be thought of the taste which dictates the rearing of such curious monstrosities, it is sufficiently evident that the process exhibits much ingenuity, and no little practical acquaintance with the physiology of vegetable life. * * * *

Drilling in sowing, and the steeping of seeds, are practiced, and have been long known to them; and in the two important matters of manures and irrigation, they are unsurpassed, perhaps unrivaled, by any nation in the world.

CHEMICAL RELATIONS OF THE THREE KINGDOMS OF NATURE.

BY CHARLES H. RAYMOND, M. D.

As we pursue the investigation of any subject, the further we advance the more intimately we find it connected with other branches of science, and the more need we experience of other departments of knowledge, and the more we are convinced of the unity of design, and the harmony of all the works of our Creator. No one is more conscious of this truth than the Horticulturist. He sees before him inorganic matter assuming organic forms. He beholds physical, chemical, and vital forces combining to develop the germs, to display the beautiful, and to arrange the elements, so as not only to continue the race, but to lend its aid in the great function of existence, by furnishing food to other forms of organization.

The labors of modern chemists have clearly pointed out the chemical relations existing between the soil, plants and animals. The chemist holds it to be a fact beyond controversy, that no new element is created or transformed from one simple substance into another. Therefore, the function of plants and animals is but the arranging of pre-existing matter into new forms.

Every germ has its own appropriate stimuli, all of which must be present in order to the full development of the plant or animal. How small soever the quantity of an element required by an organized body, it is, nevertheless essential. Thus the quantity of iron in human blood amounts to but one two-thousandth of its weight, or to about seventy grains in a man; yet let this be diminished but a few grains, and the health suffers, as is evinced by lassitude, languor, pallid lips, etc. Supply iron, and speedily the morbid phenomena vanish.

Examine a handful of soil: to the thoughtless this may appear an absurd request, but

to the reflecting mind there is much to engage and interest the attention. In the gravel you will find specimens from many formations, and, in the finer portion, still more numerous varieties. If you pour on to the soil about its volume of muriatic acid, diluted with twice its bulk of water, and allow it to stand for twelve hours, you will find that a part of the soil has been dissolved, and the fluid will have acquired a yellow color. If you separate the fluid from the solid portion, by means of a paper filter, you have a solution of those materials that are supplied by the soil to the plant, and which should be the same as those found in its ashes. If to this solution you add spirits of hartshorn until it have the odor of the spirits, it will produce a brown precipitate, which will contain iron, alumina, and phosphoric acid; filter the fluid again, and to the solution add oxalic acid: this will throw down a white precipitate, which is the lime from the soil. Filter once more, and add to the solution phosphate of soda, and you have another white precipitate, which is the magnesia. There are in the fluid other elements, such as potash and soda, which are more difficult to separate.

Take the soil that has been acted on by the dilute muriatic acid, and boil it in a solution of carbonate of potash for a quarter of an hour. You will observe the fluid will have acquired the color of a decoction of coffee, and that it contains another element of the soil, which may be considered to be vegetable mold: to this the name of *geins* and *humus* has been applied. The part it acts in the growth of plants has been the subject of much discussion.

Plants derive much of their substance from the atmosphere; they are made up, mostly, of carbon, with the elements of water—oxy-

gen, hydrogen, and nitrogen. Carbon enters into the composition of all organized bodies; hence they may all be distinguished from minerals by their becoming black on the application of heat. In order that every substance be absorbed into the tissue of a plant or animal, it must be in solution, as no solid particle, however minute, can find admission into their circulation. Chemists are not acquainted with any solvent for carbon other than oxygen. Hence we infer that all the carbon of plants must have existed as carbonic acid, which is a constant element of the atmosphere. We know, from experiment, that plants exposed to the action of light have the power of decomposing carbonic acid, giving off the oxygen, and appropriating the carbon to their own use. Starch, gum, and sugar, are made up of carbon, and the elements of water. Animals consume these substances, and, in turn, give off carbonic acid gas, which is again decomposed by the plants, and thus the circulation continues.

Oxygen is the most generally diffused element in nature; it exists in almost all the products of organization. For the use of plants, it is probably always derived from the decomposition of water and carbonic acid. Plants do not require all the oxygen from these sources: the excess is thrown into the atmosphere, for the use of animals. Oxygen abounds in the vegetable acids.

Hydrogen is found in all vital products; in plants it is obtained from the decomposition of water. There is an excess of it in oils, fats, and resins. Animals subsist on these compounds, and restore them to the air in the form of water.

Nitrogen is found either in the solid parts of plants, or in their contained fluids. It is the general opinion of chemists, that the nitrogen of plants is derived either from ammonia or the nitrates. Experiments have shown that some plants abstract large quantities of nitrogen directly from the atmos-

phere; such are clover, and the Jerusalem artichoke, and others, such as wheat and tobacco, receive this element from the soil. The value of agricultural products (in general) is in direct proportion to the quantity of this element they contain, as their nutritive property depends upon it: without nitrogen, the organs of animals can not be produced. The quantity that can be furnished by the soil appears to be limited, as it ceases to produce plants that require much of this element, after a few years cropping. Wheat and tobacco are plants of this character. Nitrogen is abundant in albumen, fibrin, and caseine. Animals appropriate these nitrogenous compounds, and return them to the soil in their excretions, again to contribute to the growth of plants.

Plants, alone, have the property of arranging mineral or simple substances into living beings. Animals can not live on simple substances they must have them already *combined* in order to assimilate them into their organs. It has been ascertained that some of the compounds, such as fibrin or muscular fiber, albumen or white of egg, and caseine or the principle of cheese exist in the fluids of esculent plants. If we allow the expressed juice of these vegetables to remain at rest for a short time, a clot like that which forms in blood, will be produced. If, after this is separated, we apply heat, a coagulum like the white of egg is produced. When beans are boiled, a skin forms on the surface as on milk under similar treatment. If we take specimens of fibrin, albumen and caseine obtained from plants and compare with those from animals, we shall find them identical in composition, we cannot distinguish them from one another by analysis.

In this rapid glance at the three kingdoms of nature, the connection is evident; to render it still more apparent, there is subjoined an analysis of soil (Sediment from the Mississippi.) An analysis of Corn, by J. H. Salis-

bury, of N. Y., and the portion of the animal body in which is to be found the element.

TABLE I.

SOIL.	CORN.	ANIMAL.
Silex, 46.00	Silex, 157	Teeth.
Phosphate, 1.00	Phosphate, 72	Blood, Bones, etc.
Iron, }	Iron, }	
Alumina, }	Lime, }	
Potash, a trace	Potash, 49	Secretions.
Soda, "	Soda, 47	Bile.
Lime, 8.00	Lime, 12	Bones and Teeth.
Magnesia, a trace	Magnesia, 7	
Chlorine, "	Chlorine, 15	Gastric Juice, Saliva.
Sulphuric acid, "	Sulphuric acid, 23	Blood and Secretions.
Iron, 14.00		
Clay, 19.00		
Vegetable mold, 3.00		
Undecomposed organic, 7.00		
100.00	From an acre, 382	

This table will serve to show the chemical relations of the three great kingdoms of nature, and may be studied with advantage by the Scientific Horticulturist, or with pleasure, even by those who make no pretensions to being scientific, but who merely enjoy the exercise of their reflective faculties.

TABLE II.

A Parallelism from M. Dumas.

VEGETABLE	ANIMAL
IS AN APPARATUS OF REDUCTION ;	IS AN APPARATUS OF COMBUSTION ;
It is fixed ;	It possesses the faculty of Locomotion ;
It reduces Carbon, Hydrogen, Ammonia ;	It burns Carbon, Hydrogen, Ammonia ;
It fixes Carbonic Acid, Water, Oxide of Ammonia, Nitrogen ;	It exhales Carbonic Acid, Water, Oxide of Ammonia, Nitrogen ;
It produces Oxygen, Neutral Nitrogen matters, Fatty matters, Amylaceous matters, sugars, gums ;	It consumes Oxygen, Neutral Nitrogen matters, Fatty matters, Amylaceous matters, sugars, gums ;
It absorbs Heat ;	It produces Heat, Electricity ;
It abstracts Electricity ;	
It derives its elements from the air or from the earth ;	It restores its elements to the air or to the earth ;
It transforms mineral matters into organic matters.	It transforms organized matters into mineral matters.

OLD ORCHARDS.

Danbury, Conn., April 15, 1851.

Prof. J. J. MAPES.—*Dear Sir:* What means must I make use of to cause my apple orchard to produce fruit? and in order that you may be the better able to direct me, I would state that my orchard has been set out thirty years; that I have taken first-rate care of the trees, by scraping and applying soft soap with a scrubbing brush as often as every alternate year; I have also manured them as often with good compost mature, with oyster shell lime mixed with it—have kept the tops open and well spread by trimming, and by these means combined, pro-

duced a healthy appearance in the trees and a fine growth of wood, but very little fruit. I have trees whose bodies will measure twelve inches in diameter, with large well spread tops, that have never produced a barrel of apples. This is especially the case with my Spitzenburghs. The soil is a loam, resting on a clayey sub-soil. A year ago last fall I turned under the sward of half of the orchard, and last season I sowed it with buckwheat, and intend to do the same this season. Previous to the above plowing, it had been grassed and mowed for ten years. I hope the plowing will have the desired effect.

This season, I think, will at least partially test it. If you can suggest any treatment that will be likely to do it, and make it public through the columns of *The Working Farmer*, you will confer a great favor upon me, and perhaps some others of your subscribers. Can I put in the subsoil plow without injuring the trees? Is there danger of severing too many of the roots? I have an orchard of two hundred and fifty quince trees, which were taken from the nurseries in Flushing, six years ago, which promise well. I hope even this season to have several bushels. I keep the trees on a single stalk, suffering no shoots to grow from under and near the surface, as the quince is prone to do. Is this correct treatment? I have also one hundred peach trees coming into bearing this season; they are remarkably healthy, and promise well. I give them, and also my quince trees, the same treatment that I do my apple trees. I am doing what I can by precept and example, to influence my neighbors to pay more attention to the cultivation of fruit. Yours, very respectfully, R. H.

You did well to plow up your sod, and have treated your trees properly. If you should wish to clean them again, do it with a solution of one pound of Bleacher's No. 1 soda, dissolved in one gallon of water, as recommended by Mr. Rennie; it is superior to soft soap, etc. You can not raise buckwheat and apples from the same piece of land, and have many apples. Too many of the constituents of apples are to be found in buckwheat, to let both succeed. Plow under your buckwheat when half grown, and the apples which may be set upon the trees will perfect, and next year plant no buckwheat in your orchards. Unless you used a large dose of lime in your compost, add more around

the trees when you plow under your buckwheat. The ashes of the bark and leaves of apple trees contain 15 per cent. of lime, and if yours have stood thirty years, they have probably exhausted most of the lime. Buckwheat is celebrated for preventing orchards from giving good apple crops. If your orchard is wet, drain it; if not wet, then at least use the subsoil plow and loosen your clay subsoil. Ordinary caution is only necessary in sub-soiling among apple trees; it will rather benefit them to cut off some of the roots and let them throw out new fibers in search of food. Root pruning is often resorted to, to induce fruitfulness, and despite the many arguments which have been offered against it, I have found practically that old orchards are improved by it when done to a fair extent. I have an old orchard which was considered worthless a few years since, which, since sub-soiling, manuring and liming, has borne good crops of apples, after having refused fruit for many years. Rub off new growths when young, instead of cutting off when large.

Manure your quinces—they are rank feeders and will pay for manure. Use cold and not heating manure—add some ashes and continue your treatment as to trimming.

Do not suppose that peach trees will succeed with the slight disturbance of soils usually given to other kinds of fruit trees, they require more. Wash their trunks with the soda wash recommended above, and shorten them in, as recommended in our former numbers, and you may render them much longer-lived and more profitable.

In trimming your quinces, put out the cuttings for pear stocks, and if you do not want them for your own use, we can find you customers for them.—*Working Farmer*.

POSTS INVERTED.

It is now generally believed that posts will endure much longer if inverted, than if set in their natural position. The fact, it is said, "has not been satisfactorily explained."

Now, it appears to me that the difficulty in explaining this is the same with that of explaining the circulation of the sap. The mechanism, if any there be, in the green tree, remains the same in the dry. In the green

tree, the sap ascends through the pores, or tubes, in the wood, and descends between the wood and bark. Hence, if a post be set in its natural position, the moisture from the ground will ascend in the same way, if not on the same principle, that the sap ascended in the living tree. Hence, such a post will be found wet or moist internally, at some distance above the surface of the ground. If

set in an inverted position, this will not often be the case (as the circulation would be downward instead of upward.) Hence, such a post will generally be dry within, even *below* the surface of the ground. As moisture hastens decay, the former must perish sooner than the latter.

Rural New Yorker.

Water may be forced through the capillary tubes of a tree only toward its top. On this principle the finer woods are sometimes changed in color for the use of the cabinet maker. A hole is bored in the side of a tree, and a bent, hollow tube has one of its ends driven into the hole, while the other end of the tube is carried up nearly the whole height of the tree. Any solution may then be poured into this tube from the top, and from the pressure arising from the height of column, it will be forced into the tree in an upward direction only. In this way woods have been colored in France while growing, and by the introduction of solutions

of metallic salts, they may be rendered nearly imperishable by rot.

Posts should be placed in the ground with the butts up; then bore a hole in the butt, throw in a small quantity of corrosive sublimate or common copperas, (sulphate of iron) and drive in a plug of wood. If the former be used, the center tubes of the wood will become *kyanized*, and be thus rendered indestructible by rot and less liable to crack or wind—if the latter, the posts will last much longer than when left without such addition.

If posts be first placed with the ends in a tub containing a solution of common copperas for a few days, and then in clear lime water, the lime will be changed into sulphate of lime as received into the wood, thus leaving the capillary of the tubes of the wood filled with plaster of paris, (sulphate of lime) and their surfaces coated with oxide of iron, precipitated from the copperas. Wood so prepared will last many years longer than if used in an unprepared state.—*Working Farmer.*

SAVE YOUR PINE TREES.

DR. WARDER:—I have had several fine White Pine Trees sadly disfigured, some of them nearly destroyed, by the attacks of a small, white, mealy insect. I have also seen it in many other places pursuing its work of destruction, to the vexation of the parties owning these handsome trees. Under such circumstances, they became an eye-sore, and a cause of mortification, instead of a source of innocent pride, excited by their handsome appearance, when growing in a healthy and vigorous condition; for in that state there are few more ornamental evergreen trees. After vainly trying several experiments to destroy the enemy, I was induced, by the representations of Mr. Sleath, to try an application of strong soap-suds, in the way of a shower-bath from one of Read's syringes, which, after repeating every week for some two or three months, has effectually rid the trees of the little destructive, and they are now making a clear, healthy growth; being,

with some of them, the first time for three years that they can be said to have been in that condition. Some years ago, the late Dr. Flagg, at that time a very active and intelligent member of the Cincinnati Horticultural Society, recommended the application of hot soap-suds to destroy the worm in the roots of peach trees: Will not some of our amateur fruit-growers try the experiment, this season? It is time to begin at once, for, although they may get no fruit this year, the next may well pay them for the trouble, if they can by that means, keep their trees in a sound, healthy condition. Try it, gentlemen, and let us know the result through the pages of the Review, and oblige, among many others,
Reading Road Nursery. W. HEAVER.

I have learned that a similar cure was effected upon the beautiful pine trees at J. Hoffner's residence, by M. Kelly, who applied soap-suds with a syringe, and destroyed the disagreeable intruder.—*Ed.*

ROSES—DIMINISHED NUMBERS.

MR. RIVERS, in the last number of the *Florist*, has successfully stripped of its rags one of the idols which the folly of collectors has got up for the admiration of simple gardeners. "Nothing in floriculture," he says most truly, "has marched so rapidly and steadily onward as an improved and common sense taste for roses. It is only a few years since all the gardening world used to talk of the two thousand varieties of roses grown by the Messrs. Loddiges; and happy was the amateur who could beat his rival by a score or two of varieties; I mean varieties in name, and not in fact. In this we had, with our usual national weakness, copied our neighbors, the French, who will now say to their English visitors, 'Ah, Monsieur! have you seen my new roses? *la voilà!*' and then you will have pointed out a seedling from *La Reine*, with an accidental stripe on each petal; or a seedling from *Madame Laffay*, with smaller flowers than its parent; then takes place the following dialogue:

English Florist. "These are of no use Monsieur; they are not distinct enough."

French Florist. "Monsieur, distinct! they are new."

E. F. "New or old, they are of no use, I tell you; have you a scarlet *La Reine*, or a yellow one, or a white *Madame Laffay*?"

F. F. "Monsieur *est impossible*; but stop! I have fine new roses from *La Reine*, all superb! *Voilà* *Perpetuelle*, *Coupe de Hébé*."

E. F. "Why, your seedlings are all pretty, but they are not distinct enough. But at what charge do you propose to sell these seedlings? for although of nearly the same color as their parent, I should like one or two, if not too dear."

F. F. "Monsieur, *they are new*. What a horrible word is that distinct of yours; I

pray you don't use it. But for my seedlings I must have a high price, as I will deliver to you all the property in them; let me see, for No. 1, you must give me £100; for No. 2, £125; for No. 3, £150."

E. F. "Stop, stop, Monsieur! I will not give you one hundred shillings for your property; they are not *distinct* enough."

F. F. "Monsieur, what a horrible word it kills me."

It is satisfactory to find a man like Mr. Rivers joining us in an attempt which we have so long been making, to persuade the world to distinguish between *selection* and *collection*. We accept him as a stout recruit, from whom good service may be expected. His trade experience tells him much that we know nothing of; we suspect that it tells him among other things, how unprofitable it is to swamp a nursery with things which only a few curious people ever ask for. Let us add, that he has to some extent carried out his principle in the last Sale Catalogue, by cutting down the varieties with no sparing hand. For instance, he now offers for sale only sixty-seven Hybrid Perpetual roses; while a neighbor enumerates one hundred and ten.

But why keep sixty-seven of these varieties? Can it be said that among them there are sixty-seven distinct peculiarities—of growth, for instance, or foliage, or color, or form, or season. And if there be, are the distinctions always of horticultural value? Assuredly not. No one who only regards the decoration of a garden, can possibly want sixty-seven sorts of Hybrid Perpetual Roses. A dozen of the best are worth all the remainder. The object of the gardener should be to obtain the finest possible result by the simplest and most unexpensive means. Let us suppose that he has space for sixty roses:

if he plants sixty, so called different sorts, he will produce an effect about as good as that of an old fashioned patch-work quilt. No skill can combine such materials into a harmonious whole. But suppose he takes half a dozen of the finest growers, the longest bloomers, and the most distinct colors; with these he may really exercise what skill he possesses in creating a brilliant scene. Mr. Rivers points this out:—"Amateurs are not now content with mixed beds of roses; all our finer sorts are planted in masses: thus, in some rose gardens formed this season, the beds are made to contain from fifty to sixty plants each; in olden times, these would each have had fifty varieties, forming a patch-work of color; now they are arranged so as to form masses of distinct colors. Thus No. 1 is *Baronne Prevost*; No. 2 *Doctor Marx*; No. 3 *Madame Aimée*; No. 4 *Géant des Batailles*, and so on; now these crimson and blush and rose-colored large groups must have a fine effect." Certainly they must—an effect that not only can not be rivalled, but can not be imitated by any higgledy-piggledy arrangement whatsoever. Let us hope, then, that the intelligent rose-growers will combine to carry out this principle of selection, saving themselves much trouble and loss, and their customers endless vexation and annoyance. For who is to know what to select from a legion of queer names? or how to produce a beautiful effect with materials of whose quality he can not possibly have any knowledge?

We have often urged this point upon the consideration of the trade, and we are glad to see that the force of our arguments is beginning to be felt. In the majority of the lists of this year, issued by the most considerable nursery and seedsmen, a very appreciable reduction has been made in the names and varieties offered for sale. Men are beginning to see the impropriety of mystifying

their customers, and we may add the unprofitableness of it. But nothing like enough has yet been done. Annuals, hardy plants, green-house plants, hot-house plants, orchards, all the race of florists' flowers, and fruit trees of every description, are quite as much in want of the weeder as roses and kitchen garden stuff. Of what possible advantage, for instance, to any one in Great Britain, can be the fourteen hundred sorts of apples, or six hundred and seventy-seven of pears, or eighty-nine of figs, or one hundred and eighty-two of grapes, or three hundred and sixty of gooseberries, enumerated in the last edition of the Horticultural Society's Catalogue of Fruits. Why, fifty apples, five and twenty pears, half a dozen figs, a dozen grapes, and as many gooseberries, answer every purpose—except that of curiosity. The remainder may as well be consigned to the rubbish heap.

We know how unpalatable these truths will prove to some of our enthusiastic friends, who cling to their collections with as much tenacity as a lawyer to old statutes, or a venerable lady to still more ancient china; but we entertain no doubt that they are becoming rapidly acknowledged as truths all over the country, and that the interest of every man consists in their recognition. In former days, the object was to have something *new*; the purpose of now-a-days is to obtain something *BETTER*; *variety* is not the present consideration—an anxious desire for *IMPROVEMENT*, has taken its place; and long may its place be thus occupied. Time is rapidly proving that the fancies of our predecessors must give way before the utilitarianism of this age, and that to maintain the former has become as undesirable as it is impossible.

Gard. Chron.

DR. LINDLEY.

Sound good sense is here offered, from which we, too, may take a lesson in this country.—*Ed.*

STYLE IN PLANTING.

EVERY body makes a great fuss about the ground outline of new planting, but how few pay a proper regard to sky outlines, or to the surface forms of the glade, the vista, or the plantation.

"With leaden eye, that loves the ground,"

said one of our British poets; and the critique is, in many instances, richly deserved.

When we cast our eyes through a beautiful vista, and behold the elegant and feathery Beech, with its leafy tracery; the delicate and pensile Birch, with its nodding plumes; the *Abies canadensis*, or Hemlock Spruce, with its rich and pendulous masses, waiting to adorn the winter's sky, we have an idea of how much lies in the planter's power; whose business it is continually to take *fresh lessons* from the hand of Nature, and to seize on and imitate beautiful combinations, wherever found.

Again, to observe the effect of massive, flat-headed forms, as some Oaks, the formal Sycamore; and the pointed forms of some Poplars, or the Larch, peering forth here and there above and among them; and the whole *lighted up*, on some fine October morning, with the gorgeous tints of the Liquidamber, the various tinted Maples, and colored Oaks, and even the old Merry tree—their crimson glow enhanced by the faint yellow of such as the Chestnut and the Lind; we have here a scene which might teach the most apathetic how lavish nature has been in furnishing the means of gratification to the eye of man, whether in form or color, or in both combined.

In adorning the banks of water, what care should be taken in the proper selection of forms! The combined effects of some trees or shrubs, in conjunction with the weeping willow, all softened down by the limpid and

rippled stream, have many a time suggested to me the idea of a fairy land in the bottom of the deeps.

There is a disgraceful mannerism frequently to be met with in fresh planting, which deserves severe reprobation. Perhaps these remarks apply in the main to town or suburban gardens; but great places are not wholly free from this rebellion against true taste—this horticultural heresy—I mean the "sticking in"—I will not term it planting—trees or shrubs, merely with regard to their height. Here all "expression," (as emanating from not only a proper selection, but a proper disposition of forms), is lost sight of. To be sure, when all is finished, it is *new work*, and looks charming, as say ladies and gentlemen who have spent half their days in cities.

And indeed, it so happens, that in due time, by means of the chapter of accidents, many a noble form bursts its bounds, and rushes fearlessly upwards; at once a standing rebuke to the planter, and an illustration of the futility of attempting to fetter entirely either noble forms or minds.

Our green-houses are generally a pretty good indication of the amount of style the "stager" possesses. I do not say, by any means, infallible indication, for here the picturesque is out of the question; and, moreover, the health and beauty of the plants, individually, have to be considered. The latter very frequently requires that the plants be staged with a frigid formality; such generally occurs with soft wooded plants, and is, indeed, a question of light.

When, however, we come to the conservatory style, and when we have plenty of room and such materials to deal with as huge Camellias, Rhododendrons, Araucarias, Acacias, the Eucalypti, with other expressive forms, in huge boxes, we have here the means out

of which the most beautiful intricacy of outline may be created; almost every thing that can be done in shrubbery, may be done here, whether as to forms or tints.

A judicious planter will arrange his finest forms, his greatest heights (ultimately), and indeed all his most significant materials, first. All the subsequent planting or filling up becomes subservient in a very great degree to them. The finishing off the mere ground outline, is a very simple affair, and need scarcely concern the points previously alluded to. Yet here there is some room for the exercise of taste in the mere disposal of forms, independent of floral beauty. Where the outline is boldly irregular, the most prominent points should be composed of materials of a decided and permanent character, as they will long continue to maintain the bold indentations of which this style is capable.

If the ground outline is defined by that old and high starched deformity termed "a verge," why, the village tailor will probably

make as good a thing of it as the artist. A verge is sometimes, indeed, a thing of necessity; those who are scant of territory, (as some of our town gardeners), must needs have a green stripe. I confess, notwithstanding, that I pity the taste of the possessor of acres, if he thus hedges in the beautiful forms of the vegetable world.

ROBERT ERRINGTON, *Oulton Park*.

The readers of the REVIEW will be instructed by this writer, who is evidently possessed of fine natural and well-cultivated taste; and as Americans, we must all feel both proud to find the high appreciation of our native forest trees, and at the same time, somewhat ashamed to think that we have not manifested more genuine taste ourselves, to enable us to appreciate the beautiful species of our own country, instead of seeking far-fetched and dear-bought. All foreigners who come to our country, are struck with admiration when they behold our trees as they occur in their native grandeur.—Ed.

GRASSES FOR LAWNS.

WHEN good turf (*sods*) can be had without too much trouble and expense, it will be more immediately beautiful and satisfying, than sowing down a lawn with fresh seeds. And even if it be too serious an item, under any circumstances, the edgings of walks and the outlines of beds, should be every where defined by strips of old turf, at least a foot in width. This will prevent the seeds from being scattered on the walks or borders, and make the edgings firmer and less ragged for several years. For sowing down grass seeds the ground should be lightly dug over about the last week in March or August, and the seeds sown immediately after. It will be advisable to scatter them rather thickly, and then tread and rake them well in, and give

the ground a thorough rolling. Care must be taken to make up the ground, by edgings already laid, to the level of the top of those edgings, in order that, when the young grass springs up, all may be on the same level, and there may not be a break or dip between the old and the new. After the grass has vegetated, it will simply require to be kept free from weeds until it is strong enough to be mown. A dry day in a showery season, will of course be best for sowing grass, as it is for all other seeds. And it ought not to be forgotten, that on the evenness with which the ground is dug, leveled and raked, will hereafter depend the beauty and smoothness of the lawn.

Some of the fittest seeds for a lawn, are

Poa pratensis and *trivialis*, *Festuca ovina*, *Cynosurus cristatus*, *Avena flavescens*, *Trifolium minus*, and White Dutch Clover. Other and coarser kinds are usually added, and many good nursery-men have mixtures of their own, adapted to particular soils. But the smaller the proportion of the stronger growing kinds

that is admitted, the finer, and smoother, and softer will be the grass, and the less mowing will it require. Any sort of Rye-grass, some variety of which is too commonly introduced into mixtures, will be especially unsuitable. — *Kemp on Small Gardens—Gardener's Chronicle.*

MANURE YOUR GARDEN.

MANURE can not be applied to better advantage anywhere than in the garden—therefore it should always have a liberal allowance. This, however, may be overdone by a continuation of the same kind of manure, in large quantities, year after year. If a garden has thus been surfeited with barn-yard manure, which is frequently the case, some other fertilizer should be applied. Lime applied once in three years, would be very beneficial, and if the soil has become too stiff, a liberal coating of road sand may be used with great advantage. If any one doubt the propriety of applying road sand to resuscitate old gardens that have been surfeited with barn-yard manure until it ceases to have any apparent effect, let him try it on a part of his

garden. Cover the soil two inches deep with the sand, give it a thorough mixture with the spade, and it will act like a charm.

Dig your Garden Deep.—If the sub-soil is not suitable to bring to the top, which is often the case, trench it, by keeping an open space on the top, while you pulverize the sub-soil. This operation should be carried to the depth of two feet at least. Many roots will penetrate beyond that depth if the soil is properly prepared. The greatest advantage follows deep digging in dry seasons, and trenching is necessary to success in wet locations.

The most important point in preparing ground for successful gardening are—manure well and dig deep.—*Maine Farmer.*

From the Gardeners' Chronicle.

HALF HARDY PLANTS.

SOMETIME since, I was in company with a gentleman who had spent several seasons on the Himalaya mountains. He was fond of gardening, and our conversation quickly turned on some of the many topics in connection with the subject. Rhododendrons came in for their share of attention, and I elicited from him, that often the blossoms of thousands on their native hills are cut off by the spring frosts, precisely as the early varieties suffer in the majority of seasons in this country. On the Himalayas the plants on the southern slopes of the ridges are the invariable sufferers, while those on the northern seldom or never sustain any injury. This he justly

attributes to the influence of the sun on the frozen plants. Their energies are aroused by the return of spring; mild days often succeed each other, a sharp frost follows, accompanied by a light morning sun, and the result is the death of the tender part of all the plants subject to such influence. Now, although many persons have for years profited by such knowledge, there are many more who have not recognized the lesson the disaster teaches. There can be no question that the failure in certain localities of plants to stand the winter and spring frosts, arises very often from causes which might be removed. In the south of England Camellias can be grown

and bloomed in the open air with tolerable success, provided they are planted in such a situation that the morning sun in winter and early spring does not shine upon them. The same with early flowering Rhododendrons. If you can afford an awning the day following the frost—provided it be not too severe to plants showing color—you may preserve them; while others not so protected, perish, or are much mutilated. An ordinary observer will here remark, how much less damage is experienced by vegetation, if a cloudy or rainy day follow the preceding night's frost. Upon this principle the gardener waters his French beans before sunrise, after a sharp frost, with what benefit needs not be mentioned. The fact is apparent. Now, there are hundreds of plants the culture of which would be rendered much more satisfactory in the open sun, by simply recognizing the principle of what I here allude to. The very beautiful and not sufficiently known Chinese plant, *Jasminum nudiflorum*, suffers much by the faint suns of January and February, when a bright day succeeds frost. A mass of rich blossoms in the open air in mid-winter is not to be lightly mentioned.

Yet the claims of this useful plant, which realizes such a desideratum, is scarcely recognized. By judicious care, it becomes an invaluable acquisition to our gardens. Some weeks past I was going through a very pretty garden, accompanied by the proprietor, and as we were passing a flower border with a north aspect, carefully screened from the south by a high wall, I was struck with a huge Rhododendron a mass of blooms. Of course I could not help admiring it. Its owner made the following statement to me—"I have possessed that plant," said he, "for several years. 'Till the season before the last it occupied the warm nook you see yonder; it put forth year after year, abundance of blossom buds, but I never enjoyed them in their beauty. Ten to one but a sharp frost, followed by a slight rain, rotted the half of them; if a few blossoms did struggle into light, they were poor unsightly things. A friend advised me to give it a northern aspect, and with what success, you are a witness. The management of out-door plants is a subject worthy of attention. I shall some day beg to return to the subject."

In this connection the reader is referred to the valuable remarks by that venerable friend of Horticulture, DAVID THOMAS, who has introduced into his garden many of the native wild flowers of different regions of our country, and with indefatigable zeal endeavors to reconcile them to their homes. The extract was found in the Albany Cultivator.

Protecting Half-hardy Plants.

EVERGREENS are believed to afford a better protection to half-hardy plants than dry vegetable matter; and when thickly applied to shrubs and young trees, and banded, succeed remarkably well. But in this climate it is dangerous to remove the covering much before the close of the 4th month. Unless the plants be making vigorous and etiolated shoots, (as the Greville rose is apt to do) it will be better to let every thing remain till the danger from even severe white frost is over and past.

A fine young tree of the Pride of India (*Melia azedarach*) four or five feet high, I once thoroughly and thickly encased with hemlock boughs; and though I have now no hope that a plant so decidedly southern will ever endure our winters without the most ample protection, yet when I removed the bandages early in spring, there were no traces of damage from the cold. A warm spell about the middle of the 4th month, however, which tempted me to trust it, was succeeded by severe weather, and it perished. The sun had been allowed to shine on its frozen limbs, and the rough winds to chafe them. I have never repeated the experiment.

For low evergreen plants, such as the Auricula or Primrose, a cabbage leaf answers completely; and nothing can be more conveniently procured. * * * *

When walking in the garden after the snow went off, I was pleased to observe how slight a covering was sufficient to protect half-hardy shrubs. Late in autumn, I had laid the Chromatella, Souvenir de Malmaison, and Solfaterre flat on the ground, covering them but slightly, yet sufficiently to prevent their radiating heat to the open sky; and there they repose, uninjured by more than 30° of frost. Without this intervention, as a correspondent remarked to me in a letter, "they would have died half a dozen deaths."

KILL THE WEEDS.

If June is the season of flowers, it is equally the season of weeds. The soil has now become warmed, and the vital forces of nature, awakened from the dormancy of winter, are evinced in the speedy germination and rapid growth of all plants, whether favorable or unfavorable to the interest of the farmer and gardener.

Weeds should be destroyed as soon as they appear. The sooner they are attacked, the easier they are killed, the less injury they do to the crop, and the less they exhaust the soil. The mere brush of a hoe, or the scratch of a harrow, will effect more in the destruction of weeds which have just vegetated, than a much greater amount of labor applied after they have had time to extend their roots and become firmly fastened in the soil. The farmer and gardener should therefore begin with a determination to prevent, in the outset, the growth of every thing injurious to crops, and must follow up the warfare through the season, not only for the benefit of present, but future harvests; for there is no truer maxim in agriculture, than that "one year's seeding may make seven years weeding."

When the weather is dry, weeds are easily killed, in their earlier stages, by being simply cut up or torn up, and left on the surface of the ground. In wet weather, or when weeds have obtained a larger size, they are more retentive of life, and though dug up and exposed to sunshine for a day or two, may take root and grow again, if rain should then occur. Some weeds are much harder to destroy than others. Of those which grow in gardens and among cultivated crops, the Purslane (*Portulacca oleracea*), and the Goose-foot, called Pig-weed in some districts, (*Chenopodium album*), are, perhaps, the most difficult to kill of annual weeds. It is, however, only on rich land that they grow with such strength as to become a serious obstruction to cultivation. Several species of annual grasses, as they grow on almost every kind of soil that is cultivated, may be considered greater enemies to the farmer.

In damp weather weeds are more effectually destroyed by being buried, than by being left on the surface; but the former mode requires more labor. In gardens, however,

the additional labor is not important. It is common to rake the weeds together in bunches, and it is only necessary to dig small holes into which they may be pressed by the foot, and covered over with two inches of earth. Only a slight covering is required, as the heat generated in the weeds will soon destroy the vitality of all in the heap.

In field cultivation, the harrow and cultivator are good implements with which to kill weeds; but to do it to the best advantage, they should be started as soon as the weeds can be seen, and kept running as often as they appear, so long as the crop will admit of their passing without its being injured. In garden culture, the scuffler or Dutch hoe, is one of the best implements. Those which have an edge on each side of the plate, and are attached to the handle by rods curving upward, are best. The operator can work it either to or from him. It is generally *pushed* through the weeds, but if one happens to be missed by this motion, it is easily cut as the tool is brought back for a new push. Another advantage of this tool is, that it does not change the general surface of the ground, and does not disturb the roots of cultivated plants, while from the manner in which it cuts the weeds, they are more likely to die than if they had been taken up with all their roots. They are also easier to work than the common hoe, and can be used with less liability of packing the soil in wet weather.

A hand-plow may be used in gardens with advantage, and we have thought it singular that such an implement was not oftener seen. It should have a wheel in front, by which the motion of the plow is steadied, and its depth regulated. The frame may be fitted to receive tools of different shape, so that the soil may either be merely skimmed, or loosened and turned over, as desired. Two men, one to draw and the other to push and guide the implement, will go over more ground in a day than they could with hoes, and for many purposes the work would be done much better. The plow itself should be made of steel, as this metal will carry a much keener edge, and do more thorough execution among weeds, and will require less force to carry it through the soil, than either wrought or cast-iron.

Albany Cultivator.

One Year's Seeding makes Seven Years' Weeding.

EDITORS CULTIVATOR:—The garden which I occupy had been neglected before it came under my care in the autumn of 1842. There was in it a small triangular plat, of less than two square rods, surrounded by gooseberries. This I found covered with the yellow dock. It has now been under cultivation for eight years, and has occasionally been deeply spaded. I think it fully within the limits of truth to say that I have destroyed upon it three crops of young plants each year; *and the end is not yet.* The fact obviously is, that each year of cultivation has thrown up seed that had previously lain too deep cast, and removed from the air to germinate. All seeds have not this strong vitality. Corn and beans

deeply planted will speedily rot, but potatoes and peas will grow from any depth at which they ever become buried by the deepest cultivation.

Let farmers beware how they neglect a crop of weeds under the impression that a little extra cultivation, the next year, will make up the difference. It may be so with some varieties, but with many it will not, as they will discover, to their expense and sorrow, in long subsequent years. Query: Who has experimented on this subject, and will give the public a table exhibiting the different vitality of weed-seeds. C. E. G.

Utica, Feb. 7, 1851.

Albany Cultivator.

DWARF PEARS.

HAVING visited the Pear Orchard described in the Horticulturist by my friend Parsons, and having been very much pleased with the appearance of his trees, the following remarks upon the subject are gladly copied into these pages, as many are anxious to have a crop of fruit "without waiting a lifetime," and are disposed to plant quince-worked pears, the subject will be possessed of interest, except to such as have satisfied themselves, with or without experiment, that "they won't do." Many of us can not wait for the slow return of pears on free stocks.—Ed.

There are few modes of culture that have made more rapid progress in the United States, than that of the pear on the quince stock. Ten years ago these dwarf pears were found in very few gardens, and then only as specimens valuable for their novelty. They were even, until a very few years since, esteemed temporary in their character, and were never planted in a permanent orchard. While this opinion may be to a certain extent true, or rather, while we have no evidence to

to controvert its truth, while the pear on its own root must always have the preference in a permanent orchard, yet those on quince may always advantageously have a place in every orchard, and may be profitably cultivated for market fruit. That this opinion is becoming more prevalent, is evinced by the large sales of pears on quince that are made annually, in various parts of the country. To insure success, they require very different treatment from those on their own root, and as a few years' experience may be of value to some who are about planting, I will briefly relate the course that I have pursued with satisfactory results.

Some few years ago, becoming convinced that the profits of the nursery business could not be relied upon, I decided with our friend Rivers, to cast out another anchor to windward. I prepared at first only four acres, intending with these to test the experiment, and then, if successful, to plant my whole farm.

Although much fruit has not yet made its appearance, the fruit buds promise me so

abundant a crop another year, as almost to warrant me in planting to a very large extent.

The field I selected was an old pasture-ground, with light loamy soil, but not inclining to sand, and a sub-soil of hard pan. This I planted with corn until the ground was well mellowed, and then put upon it two sloop loads, or 3,000 bushels, of stable manure, worth on the ground \$175.

The orchard was then planted with pears on their own root, twenty feet apart. Between these were planted pears on quince, ten feet apart, each row being thus ten feet apart, and the trees in each ten feet. Each alternative row is thus all pears on quince, or half on pear and half on quince, and the whole orchard contains 1,760 pears, 1,320 being on quince, and 440 on their own root. By thus planting, I think I can gain a double advantage. Those on quince come in bearing soon, and will produce a good crop while the others are growing, and those on pear will undoubtedly be sufficiently large to produce a good crop, and even to occupy the ground to the exclusion of the others, long be-

fore those on quince will decay, if such decay should ever take place.

Pears on quince require high garden culture, and it is my practice to put upon this orchard two sloop loads of manure every year. The first year after planting, the orchard was cropped with corn, which I found to be injurious to the trees. I have since cropped with potatoes and sugar beets, alternately, and with good management, the crop of these can be made to pay for the manure, and sometimes for the labor. With the exception of a single row, all those on their own roots are of one variety, the Lawrence. This variety originated on Long Island, is hardy, an early and abundant bearer, and a good grower. The fruit of medium size, nearly equal to the Virgalieu (Doyenné) in flavor, is in eating from mid-autumn to mid-winter, and will keep and ripen in a barrel, like apples. Its uniform price in the market in autumn, is five dollars per bushel, and at its latest period of maturity, when no other pears can be found in market, it would probably bring ten to fifteen dollars per bushel.

CATERPILLARS.

MR. EDITOR: I noticed in the past week's Farmer, a communication from "A Young Farmer," upon the destruction of caterpillars. He recommends a very good and most effectual method. Prof. Mapes, of the "Working Farmer," has, for these three seasons past, recommended the use of a peculiarly constructed camphine lamp for the same purpose. It is said, "In the multitude of counsellors there is wisdom;" and it may be that some persons who might be deterred from the work of extermination by the lion in their path, in the shape of complicated machinery, or dirty fingers, may be induced to come to the rescue of their orchards, if a convenient, simple and effectual method were suggested, which shall not be subject to either of the objections which *may* be urged against those alluded to. For myself, I object to the application of *fire*

in *any* shape about the tender bark of a growing tree; and you and I know, Doctor, that not one in five hundred of us, Down East farmers, would be at the trouble, to say nothing of the expense of Prof. Mapes' method, provided it were entirely unobjectionable in other respects. I seldom have any trouble with caterpillars, having "used them up," in the following manner:

Take a light pole or rod, of length proportioned to your trees, and drive a board nail entirely through, and within an inch and a half of the smaller end of it, letting the point of the nail project as far as it will. Fasten a small swab, or mass of cloth, or other material to this end of the pole, the nail answering instead of a peg to keep it in place: if it is fastened with a fine wire so much the better and more durable, as the strong lie will soon

destroy a string. Dissolve in a pail, for convenience, one pound of potash in three quarts of water, and your armament is complete. Thoroughly saturate the swab in the lie and sop it on the nest. If the nest is of firm material, as is sometimes the case, tear open, with the projecting nail in the swab, a small hole in the upper part of the nest, and saturate it with the lie. Watch and see that, in the mass, no caterpillar is so covered by his fellows as to escape the burning deluge, and you will find the whole colony as thoroughly destroyed as if it had laid upon a pan of lighted charcoal.

A very few minutes is sufficient to satisfy the operator that his work is accomplished, without climbing, or danger to the tree.—Whatever drops upon the *leaves* will destroy *them*, but a little care and practice will very much limit this slight evil. If potash can not be readily obtained, make a lie of good wood ashes, as strong as it can be made, and I presume it would be as effectual. I use the solution as strong as that above-described upon the trunks of my trees, weakening it only for the most tender. C. B. ABBOT.

Pushaw, June 7, 1851.

[*Maine Farmer.*]

NOTES UPON SOME VARIETIES OF THE STRAWBERRY.

BY F. R. ELLIOTT.

Soil and Preparation of the Ground. Selection of Plants.

RESIDING out of the precincts of what some call "Strawberry Ground," and where all is claimed to be known that is worth acknowledging, I have found it requisite, in order to learn as life passes on, to examine and make notes of fruits, etc., as they ripen before me. In this communication, I shall not occupy time or space with descriptions of old and well known varieties: but as cultivators have different views when planting, I offer some notes of the success varieties are likely to meet, and the mode of culture best adapted to secure a liberal return.

Soil and Preparation. It is not material whether the soil be loamy, sandy, gravelly, or clayey, for the root of the strawberry will seek its food successfully, provided the earth has been made mellow. After having decided where your strawberry bed or plantation shall be, procure one two-horse wagon load of well-rotted manure, one of tan bark, and five bundles of straw, for every two rods square of ground. Spread the well-rotted manure evenly over the surface, then with your spade commence trenching, and as you progress deposit the straw along in the bottom

of the trenching spits. Rake over the surface lightly after spading, and then spread the tan bark evenly over the surface. Your ground is now prepared for planting.

Selecting Plants. Choose only good strong plants of this year's formation; if possible the first plants from the main root. In planting pistillates, such as Hovey's Seedling, Burr's New-Pine, etc., it is better to form every third row of varieties like Burr's Seedling, which embrace both the stamen and pistil in the same flower, and to such a degree as to become valuable as impregnators, and at the same time producers.

Distance of Plants. Form the beds by setting your stakes and line at either end of your ground, so that there will be first an outside walk of eighteen inches, then a row of plants. Set one foot apart in the row; then a space of one and a half feet between each row for the next three rows; then a space of two feet for a walk. In this way your beds are six feet wide, and no difficulty is experienced from treading on the vines when gathering the fruit. The tan being spread evenly over the surface, when the bed

was first spaded, has kept the earth moist, and prevented the growth of weeds. In planting, you dibble in each plant, and thus no disarrangement is effected in the top dressing of tan.

In 1848, on making my report to the Ohio State Fruit Convention, I remarked that the "SOUTHBORO' SEEDLING" had ripened earlier than any other variety, being some four days earlier than "Large Early Scarlet," and that it promised to become a valuable variety. I received my plants from Thomas Hancock, Esq., of Burlington, N. J., by whom I think it was imported. I have fruited it yearly since '48, on sandy and also on clay soil. I find it a great bearer, very early, and sufficiently firm for a market berry.

Large Early Scarlet. This variety I have now fruited four years, and notwithstanding it is said to be first rate by eastern growers, I would not give it ground room. It is not more than moderately productive; the footstalks are so short, that unless extra care is given, the berries are all in the earth, and when one half of the berry is ripe, the other is green.

Burr's Seedling. Under this name we recognize the first seedling stawberry disseminated from Mr. J. Burr, of Columbus. Thus far I am disposed to regard it as the *best* of all his varieties. It is hardy, exceedingly productive, and of pleasant flavor. For a market berry, however, it will not answer, being of too pale a red, and too delicate in texture.

Burr's New-Pine. I have examined this variety in clay, sandy, and loamy soils. It is a good bearer, and although this is not always admitted by some strawberry growers, this variety is a pistillate, and has produced large crops of perfect fruit in grounds where no other vines existed—and in grounds when the bed was entirely surrounded by Methven

Castle, and no other variety within one hundred yards.

As a productive variety, it sustains all that has been said of it; the vines are hardy, but as regards flavor, it can not take first rank, and as a market berry, it will not answer, being too tender-fleshed.

Hovey's Seedling. Too well known to need remark. And yet, for those who plant only for their own family supply, it may be well to say, that without the mixture of some other variety, it will not form a palatable dish for the tea table. Its size is all that causes it to command attention.

Willey. I am disposed to think there may be some slight difference between this and the Hudson. The trusses are more abundant in fruit, the footstalks shorter, the flesh somewhat more acid, and the berry less inclined to form a neck. For all purposes, I regard it among the very best.

Hudson. Has qualities akin to the former, and by some may be preferred; both are valuable.

Taylor's Seedling. Rather above medium size; long ovate; light scarlet; seeds slightly tinged with yellow; deeply inserted; hardy; productive, and for two seasons that I have had it, has given promise of permanent value.

Eberlein's Seedling. If I have this true to name, it is valuable, like Burr's old seedling, both as a productive variety, and for impregnating varieties more strongly pistillate, or rather more defective in stamens. It is of a deep rich scarlet color; fine flavor, pleasantly acid; light colored seeds; prominent on the surface; medium size, and ripens with Hudson.

Jenney's Seedling. With a peculiar flavor, that can not be mistaken; it is hardy, and promises to be very productive.

Dundee. This old variety ranks with me as among the best. It ripens its fruit some four or five days after Hovey and others; is

very productive and hardy in all soils; too acid for eating without sugar, but with cream and sugar, makes the most delicious dish of all the varieties.

Methven Scarlet. This, like Hovey's Seedling, has little merit except its size, and, perhaps, one more item in its favor, viz: it does not ripen its fruit as early as other varieties, and therefore materially aids to extend the strawberry season. This with Dundee, in sections of country where late spring frosts occur, may be counted valuable, as it does not blossom as early as the other varieties. In size it often exceeds Hovey.

Prolific Hautbois. This is probably the best of all the Hautbois. It is tolerably productive, and every gentleman who grows strawberries for his own table, should have a bed for these. The delicious odor which they impart when mingled in the dish, with other varieties, needs only to be tested to be admired; and it is for this only they should be cultivated.

Western Queen. This is a seedling grown by Prof. J. P. Kirtland, of which I have made the following short description. I have a drawing, but it is not convenient for me to send it you.

Fruit; Form, rounded conical, with very little inclination to form a neck; color a rich deep clear red; footstalks long. Truss well spread; texture about like Hovey's Seedling; bears carriage well; is productive, and in flavor superior to New-Pine, in so far as I have been enabled to compare them, perhaps three or four times.

Its sexual character is pistillate.

Of the forespoken varieties, I would select for a small garden, Southboro' Seedling, Willey, Western Queen, Dundee, Prolific Hautbois, and Methven Scarlet.

For a market garden, I would plant Southboro' Seedling, Willey, Jenney's Seedling,

Eberlein's Seedling, Western Queen, and Methven Scarlet.

The remaining varieties that I have named, deserve the notice and attention of such planters as have room and time to devote to cultivating a collection of the choicest strawberries.

Of the following varieties, my experience has been such, that I would cast them out forever as unworthy of further notice, viz:—Roseberry, Downton, Myatt's Eliza, Iowa Male, Black Pine (as rec'd), Ross's Phoenix, Stoddard's Alpine, Bishop's Orange, Victoria, Ohio Mammoth, Keene's Seedling, Swainstone, Alice Maude, British Queen, Boston Pine, Buist's Prize, and Duke of Kent.

Very respectfully, etc., F. R. ELLIOTT.

REMARKS.

I can not refrain from entering my protest against this statement, as I think Burr's New Pine a deliciously flavored fruit—but it is essentially pistillate wherever I have examined it, and I can not conceive of its becoming well impregnated, when *entirely separated* from staminate, as grown by S. A. Webb, of Newburgh, or at a hundred yards distance, as asserted by F. R. Elliott, of Cleveland. We, of Cincinnati, "ignore" any such thing as yet.

It is not a little singular that there should be any question about the Willey, as it was supposed to have originated at Cleveland, though I learned from Mr. Elliott, that Mrs. W. had received two sorts from the East, and this may have been one of them. I could not there recognize the plants as our Willey, although the stock was obtained from the same garden here, as my own, that of Mr. Ernst, who procured his from Cleveland. Our Willey is very distinct from the Hudson, and, indeed, from every thing else, and a very good variety, whereas, in Cleveland, some cultivators are confounding the two—our

Willey is round, and almost never pointed; our true Hudson is broad-based, pointed, and often angular, and very firm—hence a favorite for market.

Taylor's Seedling is decided to be too insipid for our palates; and though beautiful and productive, it will soon be forgotten.

Eberlein, if "true to name," must behave much better on the Lake shore than here, where it is condemned, though an early sort, and ripe before the Hudson.

Methven Scarlet has not proved itself so good a bearer as Hovey's, and is spongy and often hollow at the core. I should be unwilling to reject the Iowa, because it is some-

times a good bearer, very strong grower, and of a delicious flavor, good size, fine form, and of early maturity.

Where is the Neck-Pine along the Lake shore? Is it too soft for market, on spring wagons and level plank roads? I obtained a clue to its origin, supposed to be at Walnut Hills, in this immediate vicinity.

The Clevelanders are recommended to try some of our seedlings—we shall be glad to know how they will like a new home, and how they will be received—they may be had true to name, if obtained from a proper source.—ED. REVIEW.

MOUNT AUBURN.—THE PARK AT CINCINNATI.

HAVE we a park in this city? yes, since the annexation of a portion of Mill Creek township to our corporation, we have become possessed of a charming spot of rural residences. To be sure, we have for years enjoyed the privilege of breathing the free air of the country and viewing the pretty gardens and ornamental trees and ornate residences, of this pleasant rural village, but now we have a right to say it is ours, and as it is subjected to our government, we shall dictate to the enterprising citizens when and how they shall regulate the grade of their highway, their "street"—yes, the pretty waving road, with gentle swell and undulation, that enables the passer to enjoy a varied prospect on either hand, may now be changed by our City council, with a deep cut here and a fill there. But, let us hope that the "*laissez faire*" policy will prevail, although it is much feared that the decree is determined upon, and that they will apply the order.

"Delenda est Carthago" (Auburn): a spirited article upon the Vandal policy proposed to be adopted in respect to this suburb, ap-

peared in the Artists' Union Journal, from which copious extracts follow: as they express the feelings of men of the most refined taste, and most interested.

EVERY one who has resided in Cincinnati, or who has even read of it in any other description, than as the great commercial mart of the Ohio valley, has seen or heard of its beautiful suburb village, known as Mount Auburn, formerly Sycamore Hill.

Who of the dwellers on the hill tops was the man or woman—we think it must have been a woman—to speak the title in which it now rejoices, history saith not. It would seem that the very name had been influenced by the refining spirit which planted and nourished a garden in the wilderness, and had naturally and gracefully glided into the more polished and classic designation of Mount Auburn. Then again there came another change. The city was too small, it wanted room—and it was stretched around the base and on the declivities of the range of hills which form the wall of the vast am-

phitheatre, in the lap of which the city lies. Well *Vox populi* prevailed. Mt. Auburn very much against the will of its citizens and proprietors passed into the hands of the city. It went through the operation of the democratic principle of "annexation."

An attempt has since been made to recover its independence; but again the representative of despotic "*Vox*" has said no! and Mount Auburn must remain within the boundaries of the city—isolated perfectly—in it, but not of it. But for a south wind occasionally, laden with odors anything but spicy, and bringing with it the dense morning cloud of smoky fog, and the incessant clangor of the disconsolate bells in a church tower, and humorously called a "chime"—but for these, Mt. Auburn would hardly believe that it is within the boundaries of a great city, with a hundred and twenty thousand inhabitants. No lamp posts and no hydrants, no police! A large dwelling house burned leisurely down at noonday a few weeks ago, and not a single alarm bell sounded. What then, you ask, has Mt. Auburn gained from "annexation," and the watchful care of the city government? It has gained a surname, a legal title, and that is all! A name that smacks of filthy alleys, dust and dirty crossings. Mt. Auburn is now "*Mt. Auburn street*." As we have said, it is in the city, but not of it.

If the ingenuity of man had been put to work, a better approach from the city could not have been devised. An approach better calculated to lighten the beauties of the cultivated landscape beyond, by the effect of violent contrast could not have been invented. Just where the old corporation line used to run, at the head of Sycamore street, the long ascent begins. The grade is, we believe, six and a half degrees, rising in a straight line for more than half a mile, and the street has somewhat the appearance of a *cul de sac*, for at the upper extremity the

bluff arises precipitately to the height of sixty feet. Arrived at this apparent termination, the road turns short to the right, skirting the base of the bluff. From the foot of the hill all along to the gap at the summit, the aspect is one of barrenness, and desolation. The debris from the deep excavation of the quarries cover nearly the whole of the visible surface. The grass has not yet taken root; the trees have nearly all been cut away, and the few that remain come straight up out of the herbless embankment sides. The dwellings are mostly small and inelegant structures, with but little attempt to repair the injuries done to nature, by the appliances of art. In the gap itself the passage is very narrow.

You stop here, and looking over the chimneys of the houses you have just passed, down upon the broad plain of the city, stretching away out on every side in the middle ground, climbing the hills, and sending out its scions of rural villages over their woody sides, and far down the valley of the river into the blue distance. A view always beautiful, and ever varying in the manifold natural effects of sunshine and shadow, and of the smoke and lurid atmosphere peculiar to the vicinity of great cities.

Resolutely withdrawing the reluctant eye from this enchanting scene, casting a hasty glance at the barren and repulsive foreground, you turn back upon them, and rounding the corner, here, at four hundred feet above low water mark, a new world appears. An avenue extends in a direct line for about three-fourths of a mile, which is now Mount Auburn street. This with the numerous private lanes and avenues which branch out on either hand is the original Mount Auburn.

But a few steps beyond that narrow portal of the gap, the evidences of what may be effected by taste and cultivation in adding to natural advantages, become strikingly appa-

rent. The summit of the ridge is said to be the highest elevation in Hamilton county, and is therefore unsurpassed in purity of air, and extensiveness of prospect. From the main ridge—"the back bone"—the general direction of which is nearly north and south, spurs branch out at nearly right angles, with corresponding vales between, narrowing as they approach the top of the acclivity, and opening out as they descend toward the beds of the creeks which discharge their waters into the river, on either side, above and below the city.

But about these hills and valleys there is nothing precipitous or abrupt. Originally near the surface of the widely extended horizontal stratification of alternate blue clay and fossiliferous limestone, these valleys and hills have been formed not by sudden abruption but by gradual crumbling of the upper strata, through ages of exposure to the disintegrating influences of the air and water. The latter in carrying off the comminuted particles, has cut down to and successively exposed layer after layer of the friable material of which these strata are composed. The consequence of such a process upon such material is, that when stripped of their aboriginal forest growth, and brought under the dominion of the plowshare, their hills present to the eye broad, gentle, and regular surfaces without a single break to mar the contour of their swelling outlines. The hand of man can not design—nay, the imagination of man can not conceive, curves more symmetrical or more expressive to the artistic eye of the very extreme of grace, than those with which nature has delineated in the thousand varying features of these rolling hills.

Of this groundwork of nature, man has so availed to increase its loveliness, that, while all around are the evidences of the highest civilization and refinement, the natural beauties are all preserved. There is an entire absence of

all appearance of stiffness and formality. The street, broad, well paved and rounded, rises in gentle ascent by long and graceful undulations—a compromise between the "railroad grade" and the natural inequality of the surface. The substantial side-walks are laid with large shelly limestone flags, not squared, sawed, smoothed and bricked together, but retaining their natural irregularity of fracture as they came from the quarry, and which are pointed by the narrow lines of living green, where the short grass finds tenacious foothold between their interstices. The houses, too, are not of the warehouse breed. Nor are they crowded together, nor encroaching upon the sidewalks. No! Each house stands upon its own foundation with its own honest walls, independent of its next door neighbors. They have breathing room. They stand, too, where they like—on the ridge crown, high above the road grade—upon a level with it, or below it. Of all sizes, shapes, and style are they, from the substantial mansion which speaks of strength and spacious apartments, to the elegant cottage lavish with architectural adornment. Nor do they stand in line, toeing the street like soldiers under drill; but here or there, advanced or withdrawn—within almost a hand shake of the footway, or, aristocratically distant, with grassy lawns, and pebbly paths between. These lawns are sometimes tastefully broken into retreating terraces, sometimes, where practicable, still more tastefully keeping the original swelling and subsiding curves—and are relieved with trees and shrubs, and flowers. Each house and surrounding grounds is distinct and distinguished. Each is with emphasis—"a Place!" Near by, the forest trees have mostly gone, and have given way to the garden and the orchard; though here and there a giant drooping elm or spreading beech lifts its high head above the infant generation which are

growing up around it. But there are parks too, not far off, which are all of forest tree magnificence, and through which, half domesticated, the deer browse as in the olden time. But time would fail us to tell of all the variety of flowering trees, of shrubbery, of climbing vines, of montant roses, of blossoms, and of purple and golden fruit. From the first brown buds of spring, to the fall of the yellow leaf in autumn, there is a never ending succession of verdure, and bloom, and fragrance, and fruition.

Nor shall we dilate upon the fair and far-reaching prospects which are open from the windows, the balconies, and the housetops. Far up and down the valley of the Ohio, and up the valleys of Mill Creek and Licking, the eye ranges over the cultivated landscape, checkered with forest and clearing, dotted with dwellings, painted by the brown fallow soil, the many colored pastures, meadows, and fields of waving corn. And further yet, till the earth becomes almost blue air, but ever to the furthest verge, the white walls sparkle in the sunlight, and repeat the tale of man's civilizing footstep over the ancient wilderness.

Such is a poor outline of the graces of Mount Auburn, as they appear to the passer by—and few there are but linger by the wayside, and turn again to view. Nor do they alone strike the eye, and captivate the heart of our own homebred, untraveled citizens. Wise men of the East, who carry notebooks, and leave large margins for complaint and cavil, have always been impressed with its calm and singular beauty. It is famous away from home. Dickens and Morpeth have both recorded it as one of the sunny places in their remembrances. The fair Swede, the nightingale of the north—she too had climbed the hills, and come but a little way within the portals, ere she cried, "Let me get down upon the ground, I must

walk through this lovely place." And, herself the earliest songstress of the spring, she warbled as she tripped along, the soft bird-notes of her melodious song.

Would you believe it? There are those who live upon this very street—or rather who eat and sleep in houses there—who are so dead to natural rural beauty, that they are exceedingly anxious to destroy it all! To cut down, fill up, level and grade, or rather degrade Mount Auburn, to the style and likeness of any other street. They have petitioned the City Council to "change the grade." Oh Mammon! Oh thou accursed lust of gold, which rhymes to *rust* in fact as well as verse! But we had forgotten. We have here to do with no motive or reason given, except one. Some of the projectors have put forth that the proposed alterations are required as a matter of *taste*. That all the graceful undulations of the road should be cut down, and the curbstone straightened on a bee line from one end of the long street to the other—and this as a *matter of "taste"*! We heard it urged as an "*improvement*." Strange ideas attach to this word in the angular perceptions of city business men. To this same swelling and sinking surface of the road, our beautiful avenue is indebted for at least one-half of its rus-urban character. You would destroy this, and call it "*improvement*" and "*taste*"! A straight line is more beautiful than a curve, a brick pavement than a grassy bank, and a cast iron lamp post more graceful than a living tree! Taste; quotha! Bless you gentlemen, you are thinking of a railroad, of greasy sidewalks, piles of boxes, rows of hogsheads, and sugar-cured hams! However, *chacun a son gout*! We earnestly hope that the "Fathers" of our beautiful Queen City, will not sanction this attempt to tear the fairest garland from her brow, but that they will let it alone.

FUNCTIONS OF THE ROOTS.—ABSORPTION.

THAT the roots of plants have a certain power of selection is now well known; it was most distinctly proved by the old experiments of SAUSSURE; he immersed the roots of growing plants in water containing an equal weight of two different saline substances, and when the plants had sucked up and absorbed half of the water, he took them out, evaporated the remaining water, and ascertained how much of the salts remained; this, of course, indicated the quantity which the plants had absorbed. It was quite plain that, if the roots merely absorbed the different saline solutions thus presented to them indifferently, an equal quantity of each salt would be absorbed, when two were dissolved together; and consequently, an equal quantity of each would be left, on the evaporating the remainder of the solution. This, however, was not the case, for it was found that the quantity of salt absorbed varied in a most remarkable manner; not only did similar plants absorb very different quantities of various salts, in absorbing equal bulks of solution of the same strength, but when a solution containing two different salts were employed, the plant took up very variable proportions of the two salts. These experiments are certainly very interesting, and deserve to be carefully repeated and extended; because, from the small number of salts which were employed, it is difficult to attempt to draw any general conclusion from them. As far, however, as they go, they serve to indicate that the salts of the alkalies are more readily absorbed than those of the earthy, such as lime; and also, that the compounds containing muriatic acid are more freely taken up than those containing other acids.

In experiments of this kind, it is necessary to select such salts as can not, in any

way, react chemically on each other, giving rise to what is termed double mean position, as in that case the results, of necessity, become complicated, and of comparatively of little value. In some of the cases described by SAUSSURE, this can not possibly take place; thus, for example, he found when a solution, containing equal parts of muriate of soda and sulphate of soda was used, the plant, in the time that it absorbed seven grains of the sulphate had taken up twenty grains (or nearly three times as much) of the muriate. This is a remarkable fact; because, neither, whilst in the state of solution, nor yet after they had been absorbed by the roots, could these two salts in any way act on each other; it is plain, therefore, that the difference, which is considerable enough, must be chiefly traced to the muriatic acid. The same general result was also obtained on comparing together the muriate and sulphate of potash; whilst the roots absorbed ten grains of the latter salt, they took up seventeen of the former; in this case, also, therefore, the effect of the muriatic acid was that of causing the plant to take up more of the alkaline base. The interest of these experiments is still further increased by the fact, that when the points of the roots were cut off, the effect in question ceased altogether, the distinction between the two salts no longer existed, and they were both absorbed in precisely the same proportion. These facts have been attempted to be explained in the supposition that the various saline substances render the water more or less viscid, or at least, to a slight degree, impair its fluidity; an explanation certainly not altogether satisfactory, because, if such were the case, the same effect would be observed on filtering saline solutions, through ordinary filters made of fine blotting paper,

whilst, in reality, no such differences can be discovered.

The absorption of saline substances by plants varies considerably, even between individual plants of the same species; evidently depending on some special condition, not indicated by the circumstances of the experiment, but it likewise varies very greatly between plants belonging to different species. The observations of SAUSSURE, and also the more recent experiments of DAUBENY, seem to show pretty clearly, that this power of absorption is quite independent of the vegetation of the plants, and that it does not follow, either that the substance most easily absorbed is that which is most beneficial to the plant, so that the latter will retain in its substance which it most freely absorbs. In fact, it comes to this, that though plants absorb various substances with very different degrees of facility, yet it does not appear that they do so in any relation to the value of those substances as nutriment, or in proportion to the benefit which they are able to derive from them. The experiments of MACAIRE, on the so-called excretions of plants, were considered to prove that plants have a power of rejection, or the means of throwing off by the roots, hurtful and unnecessary substances; but this effect is evidently quite distinct from the mere power of absorption.

The true nature of conditions most favorable to absorption, and the exact principles which regulate that absorption, are in fact still to be investigated. Practically, however, though under ordinary circumstances, the roots of a plant seem to absorb the substances presented to them in proportion to their chemical and physical properties, rather than in the ratio of their value as food; yet, as Mr. Knight has well shown, there is another matter to be taken into consideration, as bearing importantly on the absorption of

useful or hurtful matters by plants, namely, the development and growth of the roots. That excellent observer, found that when seeds were sown so that the young roots might either develop in rich or in poor soil, they were always most healthy and abundant in the former, and that when roots were put forth in a poor soil, but in the immediate neighborhood of a fertile one, they always grew in the direction of the good soil, and increased rapidly as soon they entered it. It is hardly necessary to remark, that there are limits to this power, and that the roots of plants continue to grow and develop, even though by so doing, they pass from a good soil into one which is absolutely poisonous. Every one must have often seen instances of plants growing in a good superficial soil, which flourished so long as their roots were in the good soil, but which, when they had increased to a certain size, and had therefore pushed their roots beyond the limits of that soil, immediately became unhealthy and soon died. Direct experiments, also, in which various poisonous matters have been imbedded in the soil, in the immediate course of the roots, have proved the same fact; the roots continued to grow, just as though the poisonous matter was not placed before them, and did not cease growing until they absolutely came in contact with the deleterious matter.

The consideration of these facts, indeed by further experiments, might probably lead to valuable information respecting the use of certain manures, and the effect of particular substances—such as the superphosphate of lime on the formation of roots. If plants absorb the various substances presented to them, whether hurtful or beneficial to their growth, with such different degrees of facility, and if particular substances in the first instance, act by causing an increased development of roots, it becomes a question of interest to determine what relation exists

between the absorption of different forms of the same substances, all of which are more or less favorable to the growth of plants, and the effect produced on the formation of roots. Whether, for example, that salt of phosphoric acid, which is most soluble in water, is also the one most abundantly absorbed by plants; and further, whether the compound of that acid most freely taken up, produces the greatest effect in increasing the formation of roots.

The facts recently brought to light with regard to the absorption of ammonia, and the decomposition of the various salts of that substance by the soil, seem to explain why those salts for the most part act in so uniform a manner on growing plants, very little more benefit being produced by the use of the phosphate or nitrate as manure, than by that of the sulphate or muriate. We have long been convinced, from the results of a great number of experiments on the use of saline manures, that the salts employed in many cases undergo important chemical changes, either in the soil or in the organs of the plants themselves after the absorption of the salts.

The presence of alkaline nitrates in plants will serve as an illustration of the matter to which we refer. It is well known that under certain circumstances, a considerable number of plants contain a notable quantity of niter, which may not only be detected by chemical

tests, but likewise is plainly evident on burning the dry leaves; they hiss and sparkle like touch-paper. This is the case with a great number of plants, but tobacco, lettuce, sunflowers, barage, carrot and potato are generally referred to; they do not, however, always contain niter, and the exact kind of soil or other conditions requisite are not well known. Even in the same soil, and growing side by side, two similar plants may be gathered, the one containing niter, the other none. Even stranger cases still are on record, for it has been found that plants purposely manured with niter contained none of the salt, though there is little doubt that they must have absorbed a portion of it from the surrounding soil; whilst other plants which were manured with some salt containing no nitric acid, such as common salt, or sulphate of soda, did contain nitric acid. Perhaps the most curious case of all is the presence of nitrates in plants which have been manured with sulphate or muriate of ammonia, in such instances, the nitric acid must be derived from the oxidation of the ammonia, probably in the soil previous to its absorption by the plants, but, possibly, after it has been so absorbed. Whether or not this may be the case, it is pretty certain that the salt of ammonia must have been previously decomposed, either by the action of time or some other powerful base which took from it the sulphuric or muriatic acid.

DR. LINDLEY.

A GARDEN OF BULBS.

How universally every body, even persons comparatively indifferent to gardens, admire the flowers of all bulbous-rooted plants; yet how few gardens among those of the highest keeping make them form anything like a conspicuous feature in the general arrangement. How this happens I know not, nor can I imagine, because the temptation is great; for, be it known, that from February

to July, aye, even to September, there may be kept up a continual succession of the most neat and lovely, as well as the most gorgeous bloom, according to the taste of the gardener; not that I would recommend an entire reliance on bulbs, for there are many perennials of quite another class, that would wonderfully aid the general effect, and they might be so contrived as to supply those

colors which may be most efficient at particular seasons. I am an advocate for bulbs upon the same principle that I am for perennials, apart from their great beauty; that is, for the little trouble they give one. For the most part they need only to be disturbed once in three years, and then only because the increase is so great that they want thinning. So also does a perennial; indeed, so do most perennials, for they spread their roots in three years into large patches, and require to be parted, or they become uncouth.

I have a bulb border, I can not call it a bulb garden, but it completely eclipsed all the rest of my garden, until with the increase of the third year, I was enabled to make bulbs a very important feature of the general arrangement, but I will confine my remarks to the bulb border; and although I write from memory and far from home, I will endeavor to convey an idea of its plan, arrangement and effect. In February and March the principal subjects are the Snowdrop and the early Daffodils, the brilliant *Scilla Sibirica*, and the *Crocus*, of which there are several varieties; then I have the white of the Snowdrop, the yellow of the Daffodils, the bright blue of the *Scilla*, and among the *Crocuses* the dark purple, the white, the striped, and the golden yellow. Here, then, is but one leading color deficient; but there are dwarf trees of *Pyrus japonica* upon the wall, and they, from Christmas to the end of spring, furnish a great abundance of red. But before my favorite bulbs already mentioned decline, I have early tulips of many colors—the first of which show their colors before the *Crocuses* depart, and hyacinths of many shades of blue, red, and an apology for yellow, and after this the late varieties of the so called early tulips, and the late hyacinths, and the *Narcissus* tribe assisting them, keep up a complete gallery of beauty all the month of April and part of May. The *Iris* family, which is immensely extensive begins to help me, and the late tulips take their full share of decoration until the *Iris* becomes numerous and various, when the *Lilies* render great service, and continue, with some of their species, to enliven the borders to about the end of summer. Now, during all these months, very little aid is required to keep up a full bloom, and I have not once contemplated disturbing the ground, only by hoeing

carefully to destroy weeds, nor do bulbs require watering. I do not conceal the fact that I was a considerable time before I could please myself with the arrangement to keep something like a uniform quantity of flowers always on the border, for it was only four feet wide, but I derived infinite pleasure from the changes I made from year to year, and I will also confess, now that I have distributed bulbs moderately in the larger borders, I am better pleased with the other part of the garden than with the border dependent on bulbs, except so far as it interests me as an experiment; for they are brilliant additions in early spring, and greatly assist the general effect all the year. At times the bulb border is almost too dazzling, yet I am convinced that I shall in time so regulate it as to secure a good bloom nearly the whole year; at the fall, I now have to succeed every thing the autumnal *crocuses* in variety, and the so called *amaryllis lutea*, so that there is a fair struggle to keep up the flowers till winter. My greatest trouble is to keep the border neat as the various bulbs go out of bloom; but as fast as the stems or leaves turn yellow I shorten them to the part that is a good color, and thus manage pretty well, in producing this effect.

I would not go so far as to recommend to every body to try a border of bulbs, but I would seriously advise them to have in all the borders a few patches (for all bulbs look best in patches,) of snowdrops, *crocuses*, *scilla sibirica*, and the earliest daffodils, in sixes. A few patches of hyacinths in threes, early tulips the same; if these several patches were ten yards apart they would still do wonders in "lighting up" the garden as it were. I have patches of dwarf bulbs six feet apart all along my border, but as I give all of them fair play, the patches of each family are at a considerable distance from each other; all of them are within six or nine inches of the edging. Halfway between them I have patches of taller bulbs, *iris*, *lilies*, etc., but I only plant these patches twelve feet apart, so that they come in the center, but further back between every alternate two of the dwarfs. I may be a little particular, but I place the same kind in all cases opposite each other. I have strongly recommended one of the great importers of bulbs to make out his catalogue for next sea-

son, with the names of all bulbs flowering in the particular months, so that a tyro may order exactly what he wishes. There are many bulbs of great interest, but little known by their names; and London seedsmen are generally unable to inform us anything about them; but a descriptive list, with the heights, color, season of planting, and season of bloom, would be valuable. The principal points that require attention in the culture of bulbs are—1st, to have the ground well drained. 2d, to have the soil rich and light. 3d, to

plant them before they make the least effort to grow. 4th, not to take them up until the leaves have died down; lastly, while they are out of the ground to protect them from heat, frost, and damp. I feel assured, if those who do not make bulbs a feature in the gardens will but try the effects of a few hyacinths, a few cockscombs, a few scilla sibirica, and a few early tulips, they will very soon desire to add to their list of bulbs.—*Gardeners' Chronicle*.

Who will try to make a bulb garden?

HORTICULTURAL SOCIETIES.

Transactions of the Cincinnati Horticultural Society.

THE meetings during the current month have been kept up with a great deal of interest: notwithstanding our short supply of fruits, those which had escaped the frost have been brought forward, and our friends on the "Lake shore" have contributed to supply us with tantalizing cherries, many of which are new, and some of them have been pronounced very fine kinds and worthy of cultivation. Votes of thanks have been ordered to Messrs. Girty and Elliott, of Cleveland, for their handsome contributions, and to J. P. Kirtland, the grower, and also the originator of the new seedling cherries. Most of these were embraced in the varieties noticed last month, and will probably receive further attention, as a speciality, in a future number, by one whose more intimate acquaintance with them renders him better qualified to do them justice. Black Hawk, Rockport, Cleveland, Gov. Wood, Corwin, Kirtland's Mary, and Carnelian (?), a seedling Belle de Choisy, may be mentioned as having attracted a great deal of admiration. From the same source a basket of very fine raspberries, supposed to be the *Franconia*, grown without protection.

Gooseberries of choice kinds were exhibited; to those presented by Hugh Moore, a

gratuity was awarded, by the fruit committee.

Black Currants of fine size were also brought forward.

Melons, rather anticipative of their season, appeared on the 28th of June, the variety called Borneo, grown by Geo. Watson, at Spring Garden.

Peaches, an early cling variety appeared on the 5th of July, prematurely ripened, and stung by the curculio.

Apples of both seasons have been exhibited—the Gilpin, grown by Mr. Thompson, near Hudson, on the Western Reserve, and a Russet apple, were both sound; and on the 12th of July the sweet June and the beautiful yellow June were both upon the table.

Pears—The Windsor and the Summer Bergamot were both exhibited, in an immature condition.

FLOWERS.—Hardy Herbaceous, annuals, flowering shrubs, and roses have continued to enliven the tables, and among them the beautiful display of Fuchsias, eighteen varieties, by Wm. Heaver, and his Delphiniums, Nemophila maculata, etc., may be specified; also, the show stand of fine Hollyhocks and Poppies from Wm. Cox, with many other offerings from different members.

Awards, since the last report are as follows:

To Wm. Heaver, for display of cut flowers, a gratuity of	\$ 1 00
To W. Cox, for superb display of Hollyhocks, Poppies, etc.	\$ 2 00
To Wm. Heaver, June 21st, for the best six Picotees,	\$ 2 00
To F. Schneicke and to Henry Ives for seedling Picotees and Carnations, a gratuity to each of	\$ 1 00

VEGETABLES, begin to attract more attention, which is no more than they deserved.

Potatoes, very good early kidneys and other kinds.

Tomatoes, very fine fruit presented by Geo. Swanson, on the 5th of July, to which the premium of \$ 2 00 was awarded. From the same, a sort of squash called Vegetable Marrow.

Turnips, of immense size were shown by Mr. Orange, said to be very good for the table.

One of the most important acts of the Society within the month was the rescinding of former action as to the time for the Autumnal exhibition and the subsequent change of its date from the 24th, 25th, 26th, of September, to the 1st, 2d, and 3d, of October. My views have already been expressed upon this subject and need not now be reiterated. Let us all endeavor to profit by the opportunity thus afforded for attending the great State Fair at Columbus, in the last week of September, and then come home and do the best we can here.

The society again throws open its doors to competition from any quarter, demanding only an entrance or recording fee for each article or lot, which may be brought in to compete for premiums.

Premiums Extraordinary.—On motion of Mr. Hatch, it was resolved, that this society will pay a premium of one hundred dollars for a cheap, practical, and efficient remedy against the depredations of the *Curtulio* on fruit, within this county, the award

to be made by three-fourths of a committee of twelve members, appointed by the society, and provided, sufficient time shall have been allowed for testing the plan.

The Fruit Committee, to whom was referred a communication from N. Longworth, (which may be found on page 497, in No. 10,) made the following REPORT:

"We recommend the society to accept Mr. Longworth's proposition to pay one half of either or both of the following premiums:—For a new, seedling, hardy grape, superior in all respects, for the manufacture of wine, to the Catawba, equally productive, as hardy and vigorous of growth, and as great and certain a bearer, five hundred dollars, (\$ 500); the society to determine when they deem a new seedling of this character has been raised, when they shall select twelve judges of wine to test its quality, at three years old, in comparison with the Catawba; and a committee of twelve vine-dressers, to judge of the character of the vine—and the decision of three-fourths of both committees shall be necessary to justify the society in awarding the premium.

Also a premium of two hundred dollars, (\$200) for a hardy seedling table grape, decidedly superior in all respects to any hardy table grape now known to the society, and the vine of vigorous growth, and a fair bearer; to be decided by a vote of a grape committee, to be appointed by the society, to consist of twelve members, and the decision of three fourths to be necessary—and not to be made until they shall have had ample time to arrive at a correct decision. Should more than one wine or table grape be in competition for the prize, and more than one *superior*, the prize shall be awarded to the *best*.

M. S. WADE, Chairman,	} Committee.
WM. ORANGE,	
M. McWILLIAMS,	
JNO. G. ANTHONY,	

After a free discussion, this was adopted.

Toward the close of the monthly meeting, July 5th, notice of the death of C. A. Jones, Esq., having been received, G. Graham offered the following:

Resolved, That this society has just heard

of the death of one of our members, Charles A. Jones, Esq., of Mill Creek township. The members of this association express their unfeigned regret for the loss of Mr. Jones, not only as a very intelligent and devoted friend to all the objects of our association, but as a member of society, whose absence in all the relations of life will be seriously felt in this community, and in the city of New Orleans, where he was highly esteemed as a lawyer and a useful citizen.

Resolved, That as many members as can do so, attend the funeral this afternoon.

Resolved, That the Secretary be directed to transmit a copy of the above to the bereaved family.

Interesting communications were read during the month, one of which, from Mr. W. Thatcher, referred to the insects that sting the grape, a Curculio—the accompanying specimens were referred to the appropriate committee. The vines trained above a pavement were not attacked, others had suffered much from the Curculio.

Buffalo Horticultural Society.

THE 20th exhibition was held on the 1st June. The June exhibition has always been conceded to be the very best of the season, and has appropriately been called the "Show of Roses."

The exhibition was truly fine, perhaps quite equal to any previous one, and gave very general satisfaction to the friends of Flora and Pomona. The Society can report an advance from year to year.

The Society is under very great obligations to the ladies for their generosity in sending so many fine specimens of flowers and fruits.

REPORT OF FLOWER COMMITTEE.

The collection of roses exhibited were very fine, and our amateurs and horticulturists now possess nearly every new and rare sort; and they called forth the admiration of all.

The Committee award the following premiums:

For a floral design (discretionary) to	
B. Hodge,	\$1 00
For the best collection of cut flowers,	
to A. Bryant,	2 00

For the best collection of Roses, Mrs.

L. Eaton,	Diploma
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For the second best collection of Ro-

ses, B. Hodge,	\$2 00
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For the best collection of Pansies,

Mrs. L. Eaton,	2 00
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For the best bouquet, Miss A. M.

Eaton,	2 00
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WM. R. COPPOCK,	} Committee
JAS. W. BROWN,	
ELIJAH FORD,	
	on
	Flowers.

REPORT OF FRUIT COMMITTEE.

The Committee on Fruit offered the following report:

The exhibition of fruit was remarkably fine, and has not been excelled at any time, particularly the show of cherries, which was the best ever seen on the tables of the Society.

The Messrs. Bryant showed the largest and Prof. Coppock the best varieties of strawberries, as a whole, and the Committee recommend that the premium be divided between them, to each one dollar.

For the best collection of cherries, B. Hodge, two dollars.

L. F. ALLEN,	} For Committee.
R. W. ROGERS,	

B. HODGE, President.

JNO. B. EATON, Secretary.

"Genesee Valley."

THE following account is gladly received, and here let me again urge the societies, more generally to contribute condensed accounts of their doings for publication in these pages; it is hoped they will take a reciprocal interest in one another's success, and allow me to consider my work their ORGAN, while the members of the different associations, will continue to exert themselves to aid me in my undertaking. EDITOR.

Rochester, July, 1851.

THE pleasure derived in reading reports, furnished in your columns, of the different western horticultural societies, has prompted me to give your readers an inkling of what

the Genesee Valley Horticultural Society of Rochester, had for exhibition at the June display.

Our nurserymen, always liberal in their endeavors, brought out their beautiful plants, and cut flowers, and furnished a large quota of the rare kinds in blossom in June.

Flowers of California origin were shown by Mr. James Vick, grown from seeds brought from the gold region this season. They were much admired and quite a curiosity, and considered an accession to the floral kingdom of this country.

They are known as—

Phacelia—which grows two feet high, with fine clusters of pale blue flowers, and fragrant.

Mimulus—flowers golden yellow.

Gillia—spherical-shaped, very pale blue flower.

I inclose a specimen of each. [Received.]

Seedling Peonies.—A fine display was made by several contributors, of Chinese seedlings, of a variety of colors, which are fragrant and beautiful.

Calceolarias.—Fifty-six pots of different colors were shown by Mr. Webster, who obtained the premium.

Verbenas.—Of different varieties, and very beautiful; several quite new here; and some of which were grown in Cincinnati, and brought here this spring. Nothing could excel them; *amateurs* were active in securing the kinds from A. Frost & Co., viz:

- "Iphigene," lilac.
- "Exquisite," bright scarlet.
- "Magnificent."
- "Marie Louisa."
- "Odorata," flesh color.
- "Reine de jour," blush, with rosy eye.
- "Defiance," (Robinson,) fine scarlet.
- Seedling, 24, (Jackson,) fine purple.
- "St. Marguerite," shaded crimson.
- "Susanna," pink.
- "Suzette," blush white.
- "Mrs. Sedam," very fine blue.

It is a pleasing thought, that so many active minds are at work in our widely extended country, originating varieties of plants and fruits; and every year discovers something new in different locations, which keeps up a spirit of emulation with the growers of them. Exchanges follow with the cultivators, and amateurs are much gratified in noticing the different kinds offered at the fairs.

The contributions of hand bouquets and floral ornaments, evinced the skill of the *fair hands* which culled the flowers, and then blended them in masses of beauty. Roses of all hues, and of the rarest kinds, were plenty.

Verbenas, Pansies, Heliotropes, Peonies, Geraniums, and Petunias, Calceolarias, and Fuchsias, with hot house grapes, graced the tables.

Fruits.—Strawberries of the "Burr's New Pine," "Hovey's" seedlings, and all the cultivated kinds were exhibited, and one new variety, known as "Prince of Orleans," a French variety, was much admired. It is similar to "Boston Pine."

Mr. Pardee of Palmyra, Mr. Warner of Rochester, and Mr. Hathaway of Palmyra, had a fine show of different kinds, while Ellwanger and Barry exhibited their "Genesee" seedling, which in every respect is a fine berry.

The exhibition was too early for cherries, but finer ones, or more varieties, are not grown in any region than we have here. The "Belle de Choisy," we consider the best kind grown.

The Society will merge their September exhibition with the State Fair, when it is hoped our citizens will do themselves credit, in making "Floral Hall" an object of beauty, by the display of flowers and fruits which grow so plentifully here. [Who'll go?]

It is a source of regret that your crop of

fruit has been cut off by the frost in May. We hope of our plenty, to be able to spare a supply. Truly,
J. H. WATTS.

"Albany and Rensselaer."

A kind friend has sent a copy of the Journal of Commerce, from which the following account of the exhibition, held June 25 and 26, has been condensed:

"How humanizing must be the influence of the flowers, thought I, to unite in generous competition, opposing and bitter rivals. I could not do less than subject myself to the same influence, and was soon in the presence of the pretty flowers. You know it is a mooted question among physiologists, whether the irritable and well known vital motions observed in plants, are the result of, or are accompanied with sensation. The sleep of plants is caused by the stimulating properties of light. The leaflets of some of them which expand during daylight, fold together in pairs as darkness comes on, and continue in this wedded condition until the approach of day. Others are closed during daylight, and open in the evening, as the flowers of the night-blooming cereus. There is another species which opens in the morning, and closes at noon. Some open at noon and close in the afternoon. One variety is scentless during the day, when closed, but fragrant when expanded at night. The opening or closing of some depends on a dry or moist state of the atmosphere; and there is a species (I wish I could remember the names of those lovely things) whose leaflets exhibit a tender sympathy when disturbed by a touch. The leaflet touched, and that opposite, fall or close together; the next pair then imitate the example, and so on until all are closed, when the leaf-stalk falls down against the stem, and afterward recovers its position.

The officers are taken from the two localities, and the contributions this year come in nearly equal quantities from Rensselaer and Albany counties. Mr. Newcomb of Rensselaer, exhibits about one hundred varieties of flowers. He is an amateur florist, and at his farm at Tonhannoc, with his own hands, cultivates his flower garden. Those now shown by him are hardy plants, and I was much delighted with the intelligent and unassum-

ing explanation which he gave me of his specimens. His collection embraces flowers from California and from South America, as from more cultivated distant regions; and I was surprised to learn that his energetic efforts to obtain valuable additions to our flora from our Pacific State, had ended in disappointment, and deprived him of all hope of being able to accomplish much from that quarter. Most of the productions from the seed obtained there, he had destroyed. He said that flowers of much value, were the result of long continued, judicious cultivation. One of these specimens constituted, however, the curiosity of the exhibition. It was a plant which grew upon the rocks of the Sierra Nevada. It was the *Flora de Piedro*, or rock-flower, and was exhibited in a tumbler, filled with moss and water nearly to the top, in which its slight roots were immersed. Its leaves lay flat upon the glass, and projected an inch or more beyond. Their color was a brownish green, the brown predominating; and they were narrow and strong, presenting somewhat the appearance of the firm woody frame of numerous leaves, rather than of the perfect leaf. Its peculiarity is this, that when separated from water, or from a proper place for its nourishment, it rolls itself up in half an hour, and remains in that state for years, and expands into a perfect condition as soon as it enjoys contact with water. Mr. Newcomb's brother brought it over in his trunk, where it lay for nearly two years. It was taken to the exhibition in its inanimate state, and enlivened in the manner I have indicated. Among his flowers there was a feathered hyacinth—the flower a clear purple, and the stalk a rich green. Its delicate shape, which resembled the coral, and the contrast of color, made this a beautiful specimen. There was also a *Sedum*, from the banks of the Rhine. It was cut by one of his neighbors, and was a curiosity; the stalk was white, the flower green, dashed with red. One of the richest and most elegant flowers of his collection, was a "larkspur grandiflora," of a deep blue. He had also an interesting family of seedling pinks. They were from the common June pink, which seldom casts any seed. He had in twenty-five years gathered but fifteen. He informed me that he had invariably taken the premium for asters, of which he had at home twenty-six varieties. He attributed

the perfection which they had reached, to the care with which he had for many years prevented the blooming of *single* flowers. This truly useful citizen distributes gratuitously, as I learn from a friend, from four to five thousand packages of seeds per annum. He has a true love of flowers, and with the genuine disinterestedness and nobleness, which always mark such a man, he pointed out with evident pleasure, the beauties and peculiarities which belonged to the collections of others.

Mr. James Wilson, a professional florist, is also a prominent exhibitor. He is a Scotchman, who has been here over thirty years, and now occupies the grounds which Judge Buel cultivated until his death. His bouquets display elegant taste, and they win the premiums against all opposition. One of them, a flat bouquet, with a large white cape jessamine in the center, surrounded with heliotrope, fuchsias, moss rose buds, etc., etc., was very pretty. And then a hand bouquet, composed of smaller flowers, and sprinkled over with Forget-me-not, was beautiful, chiefly from the arrangement of colors. The most brilliant color was that of an Euphorbia, a deep red, the flower having the appearance of wax, but it was modified and controlled in the most perfect manner by the surrounding but less marked beauties. I envied him the taste which could charm every beholder by a lovely arrangement of his flowers. I ought to say in behalf of California, that in Mr. Wilson's collection, there was a lovely plant labelled *Nemophyla*, which was delicate beyond any thing in the collection. Its flower was a pure white, and had upon each leaf a purple tip. His violets were enormous in size, but I confess that I prefer those which we commonly see. His specimens of flowers of the family to which the buttercup belongs, were singular and beautiful. He cultivates in his green house, to a state of extraordinary perfection, some of the common plants of the country.

Mr. Douw's contributions added very much to the collection. The visitors were struck with one of his specimens of the *Cactus*, which was rich, large and elegant. Its color was purple scarlet. It was *Epiphyllum speciosissimum*.

As one looks at a lovely specimen in the collection, and reflects that it arose in the first instance under the influence of a Higher Power, from the decay of some other form of

existence, the thought forces itself into the mind, that the Being who thus constructed such a plant, would, out of the corruption and decay of our own bodies, form the "sweet nature" which was connected with it, into a flower to bloom in the garden which surrounds his courts.

FRUITS.

ONE of the committees conducted me through the strawberry department, and like a skillful wine-taster, began with the commoner kinds, and led me step by step through the several varieties, until perfection seems to have been exhausted in "Burr's New Pine." No true conception of the difference can be formed without the benefit of that process. In eating the grape the pleasure is not in contemplating the expected repast, nor yet from holding the fruit in the mouth, but, as has been properly said, it is imparted as the luscious pulp glides over the palate. The strawberry, unlike the grape in that respect, needs to have its flavor pressed from it, before its excellence has been given to us. Who does not admire that Frenchman who, as he sat down to a dish of cherries, put on his magnifying glasses, so that their diminutive character should be unknown to him, and each cherry be enjoyed as belonging to a large and noble variety?

But to return to Burr's New Pine. Some strawberries, like many other things we see, have no character—nothing to distinguish them. This has a marked and delightful flavor. It differs from others as much and as favorably as the sunny side of a peach from the less favored portion. It is pale in its color, and does not reach the size of the Hovey, or Ross' Phoenix, or the Ohio Mammoth, but it seems to bear in these respects the relation to them, which men of genius with their race-horse look bear to the rest of mankind. I predict for them the first premium. I had never before seen the Alpine strawberry. The fruit from it is both white and red, and it is yielded until the frost puts an end to its fruitfulness for the season.

I met at the rooms of the exhibition a fine old gentleman, the picture of Judge Marshall, who told me that twenty years ago he met with this variety, and took it to Western New York, and that the single plant had enabled him to supply the gardens of many Western counties. He cultivates it in hills; and, said

he, "I am never without a dish of strawberries from June to October."

The gooseberries exhibited were uncommonly large, but I take no interest in this fruit. There was a new variety of currants, the cherry currant, but no opinion could be formed of it in its unripe state, except that it was large and beautiful. The cherries were superior in size.

These elegant specimens are not interesting merely as fruit, suitable to be eaten, and capable of administering to our enjoyment. They lead us by inevitable steps to the great evidence of *design* which they present. Who could suppose, if looking merely at the seed of plants, and the dull inanimate earth, that seeds sown in the same soil will produce the wide and delightful variety of fruits which the summer sun spreads before us—that nearly every tint of coloring matter is found in plants on the same soil—that nearly every medicinal remedy springs up from the ground—that one seed will produce wholesome food, another a deadly poison—that the lovely flower comes forth from the same earth which produces the gigantic oak? Each new form of existence results from the decay and destruction of some preceding form; and the law seems fixed, that *every thing which is destroyed is capable of some other life*. There is no life without organization, was the remark to me by an old gentleman as he was about to die, and he went with this hopeless doctrine into the grave, expecting annihilation as the result of the destruction of bodily existence. How little did he draw from the lessons which experience daily presents! Who could predicate life of the seed of plants, until he had seen it accomplished? Who, that the mere speck which lies immature and unshapen in the place which Providence provides, would result in the human form with its vast capacities, with its passions, with its hopes, its aspirations, its fitness in its best condition to live in a higher state of existence? But who, knowing all this, can think that the Providence which adjusts every thing with such skill, could render abortive and useless the existence of man by destroying the soul before it had reached the perfection of which it is capable.

But to return to the Society. It holds four exhibitions within the year, of two days each. The first commenced yesterday. The second will be held on the 9th and 10th of

July; the third on the 10th and 11th of September; and the fourth in February, 1852. It encourages excellence in fruits, vegetables and flowers. The highest regular premiums, \$5, are awarded to apples and pears. The September exhibition is generally, I learn, the best; but each must be attended with great interest. I can not help feeling grateful to those friends of the pretty flowers. They seem to be exempt from the anxieties and the cares which prevail so generally in our country. I would trust them, as gentlemen, true to that

"Honor which knows the path and will not swerve."

I feel sure that the flowers will spring up spontaneously upon their graves, and thus reward the devotion which was shown during life. B.

The Cleveland Horticultural Society holds its meetings every week, and as they control the fruit of that portion of the State, we shall look for their reports with great interest. Why does not the Secretary furnish an abstract of their proceedings?

The Columbus Horticultural Society meets every Saturday afternoon, and arrangements have been made with them to have an account of their doings for publication.

Chicago and Wauhegan have had fine shows, but no reports yet received. What is Alton doing?

The County Agricultural Societies, all over the State, are paying some attention to a Horticultural department, which is cheering to gardeners and nurserymen, as well as to the Editor. Among those which have attracted attention, are those of Muskingum, Cuyahoga, Richland, Clark, etc.; from all of which aid and comfort is expected to the good cause of Horticulture and Pomology.

In Indiana, more than twenty-five such Societies have been organized within a year, and another season they will have a great State Fair. On the other hand, what shall be recorded of our good friends in Kentucky, from whose leisure and refinement so much should be expected?

THE AMERICAN WINE GROWERS' ASSOCIATION

Met on Saturday, July 5th—Dr. Mosher in the chair. The minutes were read and amended, Dr. Mosher desiring that the expression attributed to him that the *geitzen* aided in maturing the fruit, might be reversed, as he held that the leaves of the main branch alone effected the ripening of the bunches.

M. S. Wade said he had a very good prospect of a crop. He trained high on walls and trellises.

L. Rehfuß read a report on the falsification of wines, embracing the manufacture of some kinds made here. This was adopted, and gave rise to a very interesting discussion upon the subject of fermentation.

The committee to whom Mr. Bennett's Hydrometer was referred, produced a communication and moved a vote of thanks to him for his offer of assistance in the investigation at a future period. The paper was left with the committee.

A communication was read from Mr. Jos. Clarke respecting the insect which R. Buchanan reported to have injured the leaves of his vines—a *Melolontha*.

The grape leaves eroded by the insects were again presented, and showed that the eating was upon the *upper* side, not under, as erroneously stated in the last report; also some bunches of grapes, somewhat disfigured by them. They left us early in July.

Mr. Rehfuß made some observations upon the insect, and said it was like the bug called in France the *écritain*, because it eats in the shape of letters or writing characters.

The rose bug and other insects were mentioned as destructive to the vine.

The rot was not yet found, and it was supposed that if this dry weather continued a little longer as the specimens on the table were "stoning," that we should escape.

The prospects of the crop were reported to

be more flattering than had been expected. Some members said that they should have two-thirds of a crop, and that the berries were more forward than usual. Mr. Yeatman's vineyard was very unpromising, and it was thought he would not make 500 gallons. Some vineyards were reported as filled with pale yellow foliage, which is supposed to be owing to the want of thorough deep cultivation. Mr. Buchanan recommended one deep hoeing, and afterwards shallow culture on the surface.

Mr. Rehfuß said that a second hoeing would depend upon the season. The first opening of the soil should not be done before the 1st to the 10th of May, so as to retard the bursting of the buds; a second opening should be practiced if the season required the admission of the warmth.

Dr. Mosher thought that the yellow foliage was owing to too deep culture and breaking the roots.

On motion, adjourned.

Report of the Committee on Falsification of Wines.

THE history of wine leads us back to the most remote time. The Old and New Testament, each give account of it. Noah built vineyards after the deluge. The invention of wine making is attributed in Egypt to Apis, and in India to Bacchus.

Dioscorides a Greek, and Pliny a Roman author, speak of different sorts of wine. The Greeks, particularly, must have had a good knowledge of wine making, as they even made a distinction between a first and second run of the must—(Protopon and Deuterion.) Wine at that time, was not thought fit for use, except at the age of *seven years*. The Lacedemonians boiled down their must, and brought it in to use after five years.

When sugared juices of the different fruits have undergone a vinous fermentation, the product is called *wine*.

Our society interests itself particularly respecting the juice of the grape, therefore we shall speak only of grape wines. The spirituous vinous, or sugar fermentation is a singular process, which is brought on when sugar and ferment come into contact under a proper temperature, and with a sufficient dilution with water. Therefore, besides the ferment, the following conditions are necessary:

1st. The proper quantity of water in the sugared liquids, about one part sugar to ten parts of water.

2. A certain degree of heat to bring on fermentation. (65° Fahr.)

The product of this vinous fermentation is, first carbonic acid, which escapes, this is formed of the carbon and oxygen of the decomposed sugar; the second product is alcohol, formed of the carbon, oxygen, and hydrogen of the decomposed substances. Our must, by its proportions of water, sugar, and ferment, at our temperature *always* has to undergo a fermentation, but *sweet* Catawba wines are still brought into market, with labels "pure wine," "not adulterated," "not fermented," "ladies wine," "Victoria wine," etc.

In the first place, such liquids can not be called wine, not having been fermented. Secondly, the only means to check fermentation, are heat or cold, alcohol, acids, strong alkalies, or caustic earths, and some acrid essential oils. The effect from heat, cold or acrid oils is temporary, but it is stronger from acids and alkalies, and the ferment is destroyed.

We have lately had some sweet liquids of this kind under examination. One seemed to have been boiled down, to concentrate the sugar, to which brandy had been afterwards added. Another labelled "not adulterated"

showed an excess of acid, which effected even the teeth.) Four ounces of it when treated with muriate of Barytes gave a precipitate weighing six grains, insoluble in nitric acid, indicating therefore, the free presence of *sulphuric acid* in the liquid. Such liquors are dedicated to ladies!—Madeira, Port, Malaga, Sicily and other dry wines of this class, have mostly not been properly fermented, the must commonly has such an excess of sugar naturally, and more frequently by being boiled down, that it can not ferment, they are therefore highly brandied, and by being kept either in warmed rooms or by being sent a few times to the Cape of Good Hope, they undergo a slow ætherial fermentation; wines of this kind are called cordials or liqueur wines.

Sparkling wines are composed by removing a part of their ferment, by which process a great deal of their sugar is retained, a slow fermentation goes on in the bottle, which is checked by the carbonic acid, at a certain pressure. When pure this is a pleasant light wine. But the most of what we receive here is made of old wine, mixed with sugar and brandy. In a medical point of view our Catawba wine is to be ranked as the first, with the mild, pure, spirituous wines, to which those of Germany and a part of the French belong.

If our wine dealers keep the Catawba wine for three or four years, before they bring it into market, it will rank and compare with any wine of this kind.

L. REHFUSS,
N. B. SHALER.
JULIUS BRACE.

TO CORRESPONDENTS.

Several interesting communications and valued correspondence intended for this number of the Review, have been unavoidably crowded out.—ED.

LETTER FROM N. LONGWORTH.

Dr. WARDER: I am compelled to believe, with your correspondent, "Duster," that something more than wind is necessary to the impregnation of the hermaphrodite strawberry blossom. In Mr. Schneicke's hermaphrodite seedling, as I have stated, on the border, bounded by a high wall, and fully exposed to the sun, (having a southern exposure,) not one blossom failed to produce a large, perfect fruit. There, in the coolest weather, when the plants were in blossom, and the sun shining, insects could be seen. I had several rows, chiefly Pistillates, within twenty yards of the wall, where the Hermaphrodites bore scarcely any fruit, while the Pistillates had not one perfect berry to one thousand blossoms, although standing close to Hermaphrodites. In England, in forcing their Keene's seedling, which is hermaphrodite, I am informed that they daily jar the shelf on which the pots stand. If you recollect, one of my grape-vines, in the grape-house, has every season borne about one large, beautiful berry, to fifty about the size of a pea; the latter having no seed. The bunch is large; the grape large and long, and of a beautiful color. Its true name I know not. This year the vine was shaken when in blossom, and a full impregnation has taken place, and all the berries are large, and all will have seed. There must be something peculiar in the constitution of this blossom, as all the other vines in the house are fully impregnated without any aid.

I this spring grafted upwards of fifty varieties of new native grapes, sent me from various places. Our spring has been unusually cool, and a bad one for grape grafts. Some are growing, of all the kinds that came in good order, and some will have fruit; but the backward season may prevent the ripening of the berries. A portion of them, from the appearance of the stem and leaf, may be of

great value. Several of them are clearly the Fox-grape, and do not rank as high in my estimation as they did when I was a boy, and saw none other but the small frost-grape. The most valuable grape, of this character, is Minor's Seedling. It is clearly Fox, but does not, like nearly all, if not all, of that family, drop from the vine as soon as ripe. When the vine is four or five years old, it bears abundantly, and is even fair, as a table grape. It will be valuable, in the manufacture of wine, to mix with grapes deficient in flavor: one gallon to ten is sufficient. I have said that the Catawba was of the Fox family, and that its seedlings are disposed to go back to the original ancestor. Doctor Mosher deems it is not of the same family. It is not always safe to dispute with Doctors, but my opinion is confirmed by Minor's Seedling; as Mr. Lee informs me that Mr. Minor of Tennessee, raised it from the Catawba seed.

The Rochester Knockings are not the only miracles in these days. Some cuttings were sent me from an intelligent physician in Kentucky, taken from the top of a tree, sixty feet high, and the grape of so superior a quality as to bring the residents from a distance, yearly, to gather the fruit. He vouches for its good quality. I have a graft, that has now grown upwards of eight feet, and has three bunches of buds. The stem is more strongly of the Fox character than any I have ever seen, and covered with red hairs; leaf, nearly the size of my hat, yet without the peculiar, white color of the Fox leaf on the under side. I have, within the three past years, grafted more than one hundred and twenty varieties of hardy, native grapes. I am satisfied, there are a great many of superior quality, both for the table and for wine, that I have not yet received: but,

though compelled to believe in miracles, I have no desire to receive native Fox-grape cuttings, unless of superior quality to any I have yet seen. I have said that the Rochester Knockings are not the only miracles in

these days: If these Kentucky grape-grafts produce a fine table grape, I shall no longer doubt the truth of spiritual knocking.

Yours,

N. LONGWORTH.

THE FRONTISPIECE.

By way of varying the subject a little, a piece of plain canal architecture has been introduced this month. To many of the sturdy sons of Ohio, it has been the starting place upon her soil—after a weary journey by water, how many have left the canal-boat at this point, and proudly stepped on shore, rejoicing again to be supported by terra-firma. For many years this was the head of the artificial navigation, and in those days of primitive bad roads, the canal packet, like the treck shuyt of Holland, was the favorite and fashionable mode of progression—many a great piece of mental composition has been put together in the cabin of the easy-moving boat—many a nice little piece of botanical investigation has been there conducted, during the slow progress through the flowery meads and fertile plains that furnish a level basin for the water highway.

But, to return to the vignette or illustration, which is by D. C. Hitchcock, of the Illuminated Western World, and first appeared in that handsomely illustrated work: it represents a greatly changed scene since my first impressions of the spot. On the right of the picture is first a corner of a tavern, the Montgomery house, which stands ready to receive and shelter the traveler from the canal-boat landing at this point.

On the left is one of the large flouring mills, for which as well as for other manufacturing industry, the Daytonians have long been celebrated, as they have fine water power, a very fertile country, and an enterprising population.

Across the bridge with its substantial arch of beautiful stone; a portion of the city occupies the field of vision, with its elegant court house and churches, substantial warehouses, large hotels, and handsome private residences, on wide and well kept streets which are generally well supplied with shade trees.

In the distance to the right of the picture, partly concealed by the projecting Montgomery House, is a plain wooden structure which would have been a pretty object could it have been introduced into the view; it is the bridge across the Great Miami, which, with a protecting air, flows around the city in the back ground, and adds a very pretty feature to the walks and rides of the neighborhood.

The town, however, is beautifully relieved by being seen across the large park or public square, of which the citizens have a right to feel very proud—it is the work of modern times, and the beautiful trees and shrubbery are in a young and flourishing condition; the green grass beneath them, and the nicely gravelled walks afford a charming retreat for the people. Even in a town of moderate dimensions, how necessary is a space of this kind, devoted to fresh air and relaxation from cares; what shocking folly to build a great city, without a single breathing place, I can find neither words nor patience to attempt to delineate—having voted again and again upon that question, and always with the minority, I must claim to have discharged at least that portion of duty, and throw the responsibility upon the majority.

CRITICISMS.

MR. EDITOR: I have with pleasure noticed your extreme unwillingness to attack your brethren of the Tripod—and scarcely do you appear willing to notice their errors, even they are most apparent. I therefore take the liberty of directing your attention, and that of your readers, to a few points in the July number of that excellent work, which I am sure is a favorite with you, *The Horticulturist* of A. J. Downing. I refer to the two vexed subjects of the Grape and the Strawberry which have attracted so much attention every where, and the latter of which I believe you understand as well as most people, and that is more than the writings of our Eastern Horticulturists will allow me to say of them, since the very leaders have shifted their ground more than once, and even now indorse the communications of their correspondents, when, to our eyes, at least, they are evidently wrong. All writers and talkers in the West are not yet right upon the Strawberry question, especially among our English gardeners, intelligent men as some of them are, and celebrated Strawberry growers as they may have been at home. Now, this is strange in a neighborhood which your correspondent in the July number has justly characterized as the head-quarters of the Strawberry, and where so much has been written upon this topic, of the most practical and sensible character.

In Downing's excellent serial, at page 336, under the general head of Domestic notices, I find that S. H. Webb, of Newburgh, Ohio, declares that Burr's New Pine Strawberry came into full bearing with him this year, and produced a very full crop of berries, of the largest and most perfect kind, without the assistance of any others. He also states, that in this matter there can be no mistake, as he has never grown any other kinds, nor

are any others cultivated within a *quarter of a mile* of his residence.

The Editor adds, "Such cases do sometimes occur, but our Cincinnati friends *ignore* them." *IGNORE-AM-US*, will next be written against the Cincinnati Strawberry growers, talkers and writers, and though this may be apt in some matters, such as swine and fowls, we shall plead "not guilty," as to the *berry*.

Now, allow me to theorize or speculate a little, a mode of philosophy to which, like your sensible friend DUSTER, I am not prone. Imprimis, the paragraph is headed, STAMINATE STRAWBERRIES PRODUCTIVE—and the writer professes ignorance of *Hovey's Seedling*, and *Methuen Scarlet*, common as they are; he next says that he has *never cultivated* any other than the afore-mentioned Burr's New Pine—thus admitting a want of experience in the matter, and he neglects to tell us what kind of flowers they bore. The caption of the article may have been an editorial or publisher's accidental mistake, in the hurry of composing, or possibly a typographical blunder, as it is always easy to make the poor typos a last retreat, in case of siege. Be this as it may, my theory in the case is, that Mr. Webb, being, by his own showing, deficient in experimental knowledge, (why, what will Mr. Hovey think of his *ignore-ance* of "The Seedling?") he has, like many others, depended upon the labels with which his plants were marked, and though he obtained them "direct from the *garden* of Mr. Burr, of Columbus," he has received staminate plants with them; and this has been the experience of others, who have been no less unfortunate, *vide* Horticulturist, last volume.

Now, I do not blame Mr. Burr, who, by the by, does not himself necessarily appear

a voucher, but "his garden" is at fault, and whose is not?

But I shall tire you and your readers; I have been fired with patriotic (Strawberry) zeal; let me refer to the next page, where on J. TOGNO, "Principal of the Vine Dresser Model School, near Wilmington, N. C.," makes some assertions that are startling, respecting the grafting of grapes, among which, as not least remarkable, is this: "To show you the great power of my wild vines, I may simply state, that by my method of grafting, I have 31 grafts on one wild stock, and I have another that has 60 European grafts of many kinds." In what 'my method' consists, we are left to conjecture, and I propose, that as this region is destined to be a wine-producing country, we should immediately send some pupils to the Vine Dresser Model School, in North Carolina, of which, however, I do not find the advertisement in your newspaper. In the meantime, as we have no intimation that the "wild vines" are equal to our own, in size, to wit: one foot

diameter, and rambling over the tops of majestic forest trees 100 feet high, we must be forced to the conclusion, that the 60 European grafts will be "*powerfully weak*" at the end of the season, instead of having made 30 feet of good sound wood, as they often do here, from "single eyes" the first year.

But the especial point to which I wish to direct your attention, is the influence of the stock upon the graft; it is well known that the grafts do not grow equally strong on all stocks—but I doubt whether the scions of an early leafing kind will be retarded by being inserted into the stock of one that puts out its leaves at a later period—not knowing any thing of the tardy character of the Carolina wild vine, but being very well assured, both from theory and observation, that the leafing time of every plant depends upon the bud which is to unfold, rather than upon the almost passive vessels which carry the intimation to the roots, that their services are needed to keep up the supply of nourishment. *QUESTOR.*

BOOK NOTICE.

THE FRUIT, FLOWER AND KITCHEN GARDEN: By Patrick Neill, LL. D., F. R. S. E., etc.; adapted to the United States, from the fourth edition. Philadelphia: 1851. Henry Carey Baird, pp. 427.

It has been so often said that this is the age of books, that one does not like to repeat the truism—yet nothing is more true. This is becoming more and more the case with respect to Gardeners' and Farmers' Books, which are literally showered down upon us from every quarter. It is a good sign, and hailed with joy; our gardeners and farmers will stand a chance to become enlightened, almost in spite of themselves—that is, if they will be but willing recipients of the profusion of intelligence displayed before them. But will they receive the kindly offers? Ask our booksellers, who have taken

the greatest pains to cater for their wants—their absolute necessities. Alas! they will tell you that their too ample provision lies untouched upon their hands—almost unasked for by the craving multitude, who are really in a "destitute" condition, though they, unfortunately, know it not.

This volume, as its title implies, is a *multum in parvo*—the three great departments have all been treated; and as the author has been Secretary of a Horticultural Society, he should speak *ex cathedra*. His prelections should have weight and authority. They convey to us the views, plans and practises of those who are best trained in such matters across the water.

The American editor does not see fit to

announce his name, else it would be a quite pleasant task to thank him for the very pretty compliments he has bestowed upon Western Horticulture. This kind of praise is ever acceptable, but especially so from sober Philadelphia, who, though she may be proud of some of her sons in the West, is of too cautious a mold, and far too prudent, to expend any great amount of flattery upon our cis-montane efforts. Pardon this digression, and allow the preface to the American edition to speak for itself:

The small but very comprehensive work here presented to the American public, is the production of one who, for more than thirty years, was secretary of the "Caledonian Horticultural Society," and who enjoyed every facility for acquiring the very best information relating to the subjects upon which he treats. That it has been favorably received in England and Scotland, would seem very clear from the fact of its having gone to a fourth edition in a very short time. The treatise presents, in a condensed form, a summary view of the condition of horticultural knowledge in Britain, and especially in Scotland, from whence we derive the most intelligent and successful gardeners. The superior skill of these in the management of plants, and the culture of many rare kinds of fruit, is doubtless owing in a great degree to the extraordinary exertions which they have been accustomed to put forth to secure success in a climate far less genial to fruits and flowers than that of most parts of the United States. * * *

Within a very short time, the vine culture has met, in the United States, with extraordinary success; and the production, from native grapes, of wine rivaling some of the best kinds derived from the Rhine and the Moselle, has occasioned no little surprise, especially among those who entertained the prevailing theory that no good wine could be produced on the eastern portion of a continent. Mr. Longworth, of Cincinnati, the chief among many pioneers, by refuting this dogma, has laid his countrymen under the great obligations, and added a new resource to the already teeming wealth of the American soil. It is the importance which we think

invests this subject, which has led us to devote such particular attention to American grapes and the mode of culture adopted successfully in the vicinity of Cincinnati; for much of which information we have been indebted to an extremely valuable publication made last year by Robert Buchanan Esq., of that city.

The reader will here see that in the subject of grape culture, at least, the West has been consulted, and largely drawn upon for information.

The work is recommended as a repertory in which we may ascertain what is done by the best gardeners in Britain.

A FEW WORDS TO ONE AND ALL.

THE FIRST VOLUME of the Western Horticultural Review is drawing to a close. I have many acknowledgements to make, especially for kind aid rendered by the press. For the present consider them made—take the *will* for the *deed*, 'tis all the Printer will allow me to say now—for kindnesses received, accept my thanks—my friends one and all, continue your good offices, write, send specimens—get subscribers and ask them to pay,—these are the only means to enable me to progress pleasantly.

Correspondents have not always been immediately brought forward—it is necessary to keep a nest-egg of "*copy*"—among those in this category is my valued friend from "Strawberry Hill," who has proved his place to be no misnomer, as appears from the papers, which notice his crop very favorably. The "*strawberry ground*," like the area of freedom, is extending, of this, *we* do not feel any jealousy here, "no pent-up Utica confines our powers."

Correspondents who are so good as to aid the Review with their thoughts, will please send in their communications as early as possible in the month, to insure an insertion in the next issue.

My good friend from St. Stephens, Alabama, will confer a favor by sending his views and the result of his observations, in return for which, his inquiries shall be answered at an early date.

EDITOR.

METEOROLOGICAL TABLE.

CINCINNATI, JUNE, 1881.

THERMOM'R			WEATHER.			RAIN.	WIND, ETC.
Date.	Minl.	Maxl.	Sunrise.	Noon.	Sunset.		
1	69	81	rain	clear	clear	.45	Light S and S W; brisk S W; calm at night.
2	66	79	clear	do	cloudy		Light N W; calm.
3	65	79	cl'y, rain	do	clear	.35	Calm; light S W and W.
4	68	76	variable	variable	cloudy		Light W and calm.
5	67	86	cloudy	clear	cl'y, rain	.30	Light S E; calm; light S; calm. Thunder, lightning.
6	69	86	cl'y, var	do	rain, var	.10	Light S; brisk S W; light S W. Fire flies appear.
7	69	82	cloudy	do	clear		Light N W.
8	69	81	variable	cl'r, rain	do	.15	Light S W; brisk S W; light N W; brisk N W.
9	61	71	clear	clear	do		Light N W.
10	58	81	fog, clear	do	do		Calm; light S W.
11	64	79	clear	rain	cloudy	.15	Light W; rain at night Raspberries.
12	65	81	cloudy	clear	var, rain	.10	Calm; light W and calm.
13	66	75	do	cloudy	clear		Light W; calm; light N.
14	59	73	clear	clear	do		Calm; light N.
15	64	78	variable	do	do		Do light E.
16	64	71	rain	cloudy	variable	.10	Do light E.
17	62	82	clear	clear	clear		Light E; light S E; light E.
18	61	82	variable	do	do		Light S E.
19	62	83	clear	do	variable		Light S W; light S.
20	69	84	do	clear, var	clear		Light S W; brisk S W; calm at eve. Mulberries.
21	68	89	do	variable	do		Light S W.
22	72	88	clear, var	do	rain, cl'r	.15	Light S W; brisk S W; calm at eve.
23	67	79	clear	do	clear		Light W. Locusts disappearing.
24	63	80	do	clear	do		Light N W; calm at eve.
25	62	86	do	do	do		Calm; light W; calm.
26	71	89	cl'r, rain	do	do	.05	Do light S.
27	70	86	variable	do	do		Do light W; calm; light E.
28	70	93	fog, clear	do	do		Light E; brisk S.
29	79	85	variable	do	cl'y, rain	.20	Brisk S; light S W; brisk S W; light S W.
30	72	80	do	do	clear		Light S W; brisk S W; brisk N W.

Total rain, inches

2.10

EXPLANATORY.—Calm means when a flag hangs to a staff; Winds classified according to force, into light breezes, brisk breezes, high wind, storm.

Mean temperature of the month.....	73.94
Do do June 1850.....	76.29
Do do do 1849.....	76.96
Do do do 1848.....	72.14
Do do do 1847.....	70.36
Do do do 1846.....	69.84
Do do do 1845.....	74.00
Mean temp. for June for the above 7 years.....	73.36

Clear days in the month..... 7

Variable (cloudy at times)..... 23

Cloudy (sun not visible)..... 00

Highest temperature in the month..... 93°

Lowest do do do 58°

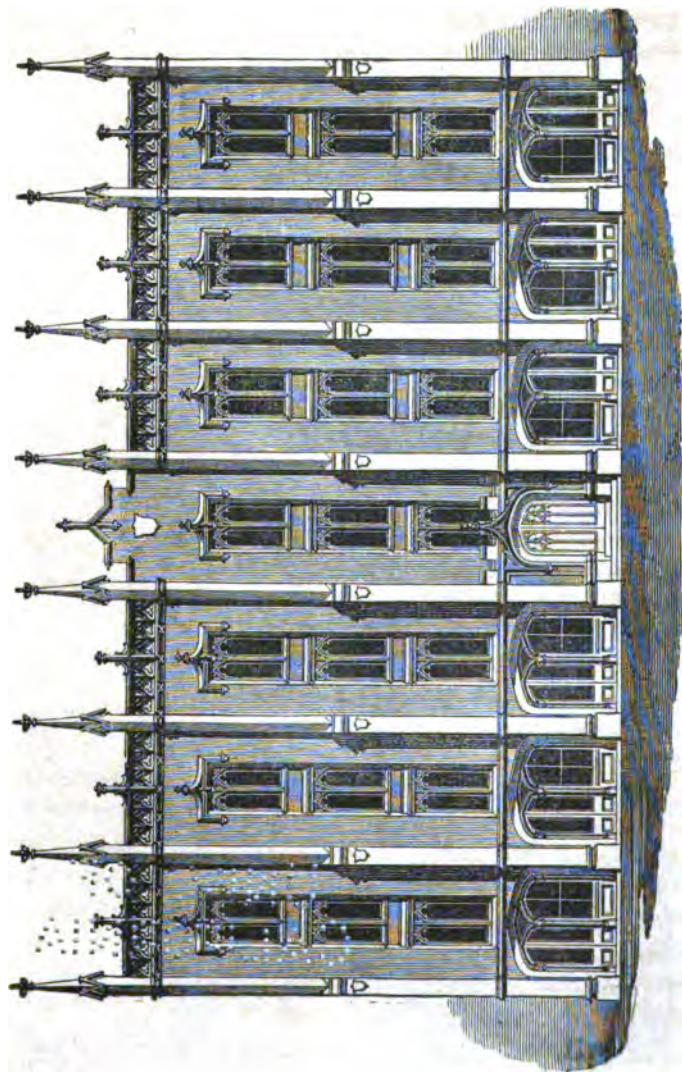
Range..... 35°

OBSERVATIONS.—The proportion of rain is much below the usual average—say about one half. The very frequent recurrence of small showers is remarkable. A very pleasant month. JOHN LEA.

POSTPONEMENT.

THE Autumnal Exhibition of the Cincinnati Horticultural Society will be held on the 1st, 2nd and 3d days of October.

UNIV. OF
CALIFORNIA



Medical College--Cincinnati.



VOL. I.

SEPTEMBER, 1851.

No. 12.

THE CLOSE OF THE VOLUME.

KIND READERS,—You who have borne with my many imperfections as the conductor of a public journal during the past year, to you I now express my hearty thanks for your forbearance, knowing full well that you deserve them. To you, on the contrary, who feel that you have not had reason to be satisfied with the result of my labors, allow me now to express a few words apologetic.

In the salutatory you were advised that the Editor was all unaccustomed to the arduous duties he had undertaken,—that he had no practical knowledge of the Editorial function—that he had a true love for horticulture, almost inbred in him—that he had a determination to discharge his duty as industriously and perseveringly as his other duties would allow, and that he intended to provide as good a horticultural monthly as his means and his promised correspondence would enable him to make. He feels satisfied, at the end of the year, that, so far as circumstances would permit, those promises have been fulfilled, and that those pledges have been redeemed. To you, however, it is left to determine for yourselves; if you agree with me, it is well, if not, I must endeavor to submit to your displeasure.

To all those who may now first see these pages, if any such there be, and who have

not read the previous portions of the volume, I have only to express my sincere regrets that our acquaintance had not commenced at an earlier period, and my earnest desire that the present may be but the beginning of a long connection that may prove agreeable to both of us—for so many who were strangers, except through this medium, have given me the most flattering assurances of their entire satisfaction, that I have been almost forced to believe, that the effort to please, by giving a good gift, has been entirely successful. My only regret, however, is excited by the reflection, that the facilities have not been greater for reaching a great many more persons in the same way, so that they might have had an opportunity of rendering the like agreeable expressions of satisfaction.

Now, as Editor, I shall not attempt to say that the work has been so entirely successful in pleasing myself, the labors being of so new an order; it could not be expected that all parts of the service could be gracefully performed by a novice workman. For all the many deficiencies and blunders, want of finish, tone, spirit, or any thing else which may be detected, it is only asked of all, that you will try to bear with me and them, and instead of being irritated, try to aid me by rendering a helping hand, and to correct the

mistakes with good friendly advice, such as has already been received from some kind friends, and, I trust, advantageously applied.

The great deficiency which has been felt, and a very serious one too, in a practical point of view, is the great want of knowledge in the whole business of *publishing*—this is a very important department, requiring a great deal of tact and time as well as knowledge, and a matter, in all the minutiae of which the lack of experience has been severely realized by the Editor, who has not, thus far, been able to supply the want.

Those who have so liberally subscribed from a distance and who are supplied through the mails, may rest assured that this part of the labor has received personal attention, in almost every instance, and whatever irregularities may have occurred must be set down to the unavoidable accidents of the roads, etc., etc., rather than to any neglect in the starting of the parcels. To all who have sent money, it has ever been my intention and desire that they should receive a regular receipt with the next number, but if any should not have received an appropriate acknowledgment, it will be gladly rendered to those who will advise me of their desires.

To Correspondents a few words should be addressed: in the first place to thank them for their very kind aid, which has been most acceptable. In some few instances the Editorial function may have been performed with too much of the surgical spirit, which has induced the *excision* of "redundant parts," and in some others, the medical idea has prevailed with the Doctor, inducing him to attempt a *cure* of ailments which he thought he had detected in the constitutions of the articles. These modes of managing the cases may not have been entirely acceptable to the patients under care, but a rigid desire for melioration has guided in the treatment of all such invalids, and if the rules of art

have been transcended, the parties are entreated to look with a kindly smile upon the error, if they so consider the matter. Some communications have not been brought forward at as early a date as their writers might have liked, and others have been entirely suppressed; to the first class it must be said that a good thing will not spoil by keeping, and upon the principle of reserving the best dishes to the last, it is sometimes an implied compliment to retain an article—besides this, you may be reminded, or if ignorant you may be assured, that it is a very pleasant thing to a young Editor, to have a little stock-in-trade on hand, which he may look upon as so much capital to draw on at a future day. The class of correspondents whose communications may have been suppressed, may be here informed that these pages must be preserved free from bickerings and personalities, as such things, even among editors, who appear to be privileged to abuse one another, for the amusement, or rather disgust of their readers, are entirely ruled out, and ever shall be—they can have no place here.

One word more to correspondents, as it is to be hoped they will continue their favors, even after the above announcement, you are entreated, in all cases to send in your names, whether your diffidence will prevent a desire to have them appear in print or not—it is absolutely essential that the editor should know the parties to whom he is indebted, and then the responsibility must rest somewhere. To a simple communication the real name is always preferred by the reader, who can then realize that the advice rendered or experience reported is of a real and not a fictitious character.

The issue of the numbers has not been so regular as was desired by the Editor, but the reasons which have been already urged to account for other short-comings might be

again recounted in explanation of this—arrangements have now been made, which, it is believed, will prevent any difficulty in future; and it shall be my pleasure, so far as it is possible, to issue the numbers promptly. It has, of course, become necessary to present the meteorological tables more as a piece of history, recorded after the fact, than as a bit of news as to what has just transpired; this, it is believed will not depreciate the value of this department, and it is one that is considered of great importance to horticulturalists.

The occupation has been a very pleasant one to me, and will no doubt continue to be so if all parties, and especially those who receive the Review, will be so kind as to be prompt in meeting the demands made upon them, as I have started and mean to continue in the practice of the maxim that "the laborer is worthy of his hire." The *printer* must and shall be paid; do you see to it that the conductor is provided promptly with the necessary means, in *advance*. Let him receive the required amount from you on the receipt of the first number of the next volume, and you

need not fear for the result. Truly a Western journal is worthy of support, and as you have no other, there can be no better than the one before you—render your assistance then without a word; and with your individual countenance give also your cordial support among your friends and neighbors, so as to induce as many as possible to unite in the undertaking; it is to each of you only one risk, to me it is the aggregate of many—and a serious matter. Lend me also with your monetary support, your literary aid, continue to write for me, and thus increase the interest of these pages, by giving your personal observations—they are often the very information which other readers need—and may be much more practically useful than the sagest theorizings of the closet philosopher.

With these suggestions allow me to thank you for your patience during the past year, the first of my Editorial life, and it shall be but the first of *many*, if a kind Providence should spare my energies and if you be disposed to favor the undertaking with your smiles.

A SOIL FOR THE LAURELS.

BY DAVID THOMAS.

AZALEAS, Rhododendrons, and Kalmias, are among the most ornamental shrubs for the border; but a large portion of the soil in western New York, is unsuited to their growth; and when removed to it from their native localities, they soon decline, and eventually perish. In such situations, I have not had the Kalmias to flower more than once or twice; and *Rhododendron maximum* has never survived long enough to come into bloom. Many other fine plants have also suffered in the same way.

All this, however, should excite no surprise, when we consider the special adaptation of

some plants to particular soils,—for while certain minerals, constitute a necessary part of their *food*, to others the same minerals act as *poisons*. But passing to the more practical part of the subject, I think there are but few, if any, neighborhoods in this region, that do not afford suitable soils for all the above mentioned shrubs. After much disappointment, and feeling that I would willingly give five dollars for one cubic yard of Laurel-earth, I concluded that the Pyrolas, vein-leaved Hieracium, and the Earth-mosses might indicate such a soil. Further observations satisfied me, however, that we had no

such soil, except where the *leaching process* had a fair chance to operate, and such I have found near the brink of our deep ravines. Now, if to those shrubs, lime is a poison, as I have some reason to believe; and if it sinks through the soil according to the statement of Lord Dundonald, then all the mystery (if there be any) is explained.

I may further remark, however, that though the northern drift or diluvium which covers our rocks and constitutes our subsoils, must have been the same at the time of its deposit,—both at the brink of those ravines and at short distances back from them,—yet now there is an evident difference in their texture and color, as if in the first case, something had soaked away. Probably carbonic acid acted as the solvent.

But besides the loss of some original ingredient from the deposit, the plants which grow there would, in the course of time, impart their own peculiar properties to the ground, and thus form a soil, differing greatly from any other soil formed by vegetables of a different kind. This suggestion is not a fanciful theory. For several years after the introduction of *Scilla Siberica* and *Crocus serotinus* to my border, they scarcely increased; but now, having had time to assist in preparing a proper soil for themselves, the increase is very considerable.

Well, now for the result. A border on the north side of a board fence, was dug out to the depth of fifteen or eighteen inches; and soil from the brink of a ravine, taken off not more than two or three inches deep with all its moss, etc., substituted. In this selected mass, I planted *Kalmia latifolia* and *Azalea pontica*, and after a trial of six years, they go on flourishing and to flourish. The bronze variety of *Lilium canadense*, from southern Pennsylvania, which has not done well in common soil, is also very vigorous, while

Trillium pictum and *Helonias dioica*—close along side—enjoy the best of health.

Latterly, I have brought greater quantities of that earth into other parts of the same border, and with manifest advantage. *Magnolia obovata* (from China) in another border, had become diseased, the leaves assuming a whitish cast; and though I had resuscitated it once by the application of sour or sterile soil from an adjoining county, it entirely failed when I applied it again—the roots having probably entered too deeply into an ungenial subsoil. One year ago last spring, it appeared to be declining very fast; some of the branches were dead, and no flower buds on the remainder. It was, therefore, taken up, divided, and planted in laurel earth; and all its leaves are now of a fine, healthy green, with new vigorous shoots.

But other plants also, have done better in this selected soil. The English Primrose is in the best condition, and its roots remain undisturbed by the frost. *Funkia undulata* (from Japan) had stood several years in a fertile spot, into the composition of which muck from the woods had largely entered, but it had produced no flowers. One year ago, I therefore set it in this new soil, and it is now coming into bloom finely.

No plant, however, has grown more luxuriantly in this new locality than *Rhododendron maximum*. From a spot where it was rather crowded, I removed it this spring, carrying it on the spade with some of the same earth, for it was only fifteen inches high, divided into four branches; and now it has twenty branches averaging six inches in length, and making in all a growth of ten feet this season. Perhaps nothing better can be hoped for in any soil.

Greatfield, near Aurora, }
Geauga Co., N. Y., 6th month, 1851. }

REMARKS.—The formation of such a soil as will suit these and other Alpine plants, is

a great desideratum, and one not easily accomplished in every part of the country. In this neighborhood the *Rhododendron maximum* and *Kalmia latifolia* rarely succeed, though some plants appear to do very well in positions sheltered from the sun. The geological formations of western New York, where the plateau of lime stones and shales, covered with "drift," is frequently cut by steep ravines, the filtering action alluded to by the writer would be very likely to modify the character of the soil in a way to render it more suitable for those plants that love peaty earth—especially if care be taken to combine a due proportion of wood earth, decaying leaves, etc. The peats which abound in many parts of Ohio, appear to contain too much *lime* and too little *silex* for many plants that require a soil of this texture. *Azaleas* do not succeed at all in any of the native soils which have been combined for them with us, and require a liberal admixture of Jersey peat, in which they luxuriate. There is no doubt, however, that if we will profit by the suggestions of D. Thomas, we shall suc-

ceed in growing many of the plants that have heretofore appeared rather refractory. The adaptiveness of certain plants, is very remarkable, and has been before alluded to, but is peculiarly illustrated by some swamp plants. The *Taxodium disticha*, or Cypress, from the swamps of Louisiana thrives beautifully on our firm aluminous soils on the dry hill tops, beside the *Larix Americana* from the Tamarack swamps of the colder north, and beneath them the *Spiraea lobata*, *Lobelia cardinalis*, Shrubby *potentilla*, *Phlox maculata*, *Lysimachias*, *Uniola latifolia* and many other swamp plants from our wet prairies, thrive better than in their natural positions.

I hope that D. T. will not feel aggrieved by my having thus again introduced him to the readers this of work; it is a source of great pleasure to me, and only what is due to him. He is, therefore, now heartily welcomed and is requested to continue to favor us with his 'words of experience,' as we all know that they will combine practical knowledge, common sense, and scientific information.

[Ed.]

DRAINAGE.

THE necessity for a thorough drainage of the soil is equally apparent for the gardener as for the farmer, and the former should be even more anxious to take advantage of its benefits. In this *extensive* country of ours, where there is so much room to choose a site or location for a garden, and where it is considered so slight a matter to pull up stakes and move to other "diggings," it is very doubtful whether the immense advantages of *efficient* drainage will be realized soon. With us it is a question of expense merely, and the excellent effects of drainage are good naturedly taken for granted by those who have or may have a good natural underdrainage of

porous gravels or loose rock strata. The remarks of T. C. Scott, at a *Farmer's Club*, are introduced below to show the importance attached to the subject in another part of the world. Near our large cities where land of any quality commands a high price, it will be reckoned a matter of some moment to know how to meliorate that which is too cold and wet.

ED. REVIEW.

The more the subject of drainage is discussed, the better it is likely to be understood, and it is necessary to fix its general principles clearly in our minds, to enable us to settle to our work with that degree of confidence which is essential to success in practice.

The records of the application of drainage to the improvement of land go back to a very remote period. We read in the writings of Virgil and others, of drainage operations carried on by the Romans nearly two thousand years ago, and they appear to have been familiar with it as a system. Two hundred years ago, Blythe, in his *Improver Improved*, addressed to "Cromwell," strongly urged the necessity of carrying out a system of drainage there laid down. In Essex, nearly 150 years ago, furrow or parallel drainage was practiced; and about fifty years later, it was applied, to some extent, in several of our southern counties. We hear but little more of it until it was again revived, upon a new principle, by Elkington, in Warwickshire, about the year 1770; and after his day, it seems to have lain almost dormant for half a century. Elkington's system being that of tapping springs, sometimes at great depths, and of bringing up the water, as we do in wells, and then carrying it off by an ordinary drain, was not generally applicable, only a comparatively small portion of farm land being subject to wet from this source; and I believe the celebrity which this system procured for Elkington, coupled with a large grant of money from government, was owing more to his personal ingenuity and skill in carrying it out, than to the value of the principle involved. We may naturally infer that disappointment in its results must have occurred early after its introduction; for its practice generally was soon abandoned, although there was no rival system at that time ready to supersede it. After that period the science and practice of drainage remained in a comparatively quiescent state for nearly fifty years, or from about 1780 to 1830.

About the year 1830, Mr. James Smith of Deanston, roused the country from its lethargy, and succeeded in producing what may be more correctly designated a *revival of an old*, rather than a new system. The good he did, however, can not be easily over-estimated, as he inspired an interest in other means of improvement, as well as in drainage; and, by his writings and example, gave a legitimate direction to the capital and enterprise of the landholders throughout the country, and caused much labor to be absorbed, with great benefit to the nation, if not

in all cases to individuals. But though Mr. Smith was a man of science, as well as of practice, his principles have undoubtedly been lately superseded (by fair reasoning and detailed experiment) by those of Mr. Josiah Parkes; and within the past six years most practical men, who have given consideration to the subject, have had their minds fully set at rest as to the true principles of drainage.

The necessity of drainage is now so generally admitted, that I need not enter at length into its merits. When I state that nearly one-fourth of the area of the United Kingdom or 20 millions of acres, require drainage—that it would employ 100,000 men for 50 years' and require an outlay of £80,000,000 to accomplish the work—you will see how important it is to have its principles correctly understood, and its practice properly carried out. It may be long before this gigantic task is accomplished; but as upwards of *three millions* have already been granted by government on loan, and greater facilities given for obtaining private loans for this purpose, we may conclude that capital will continue to be directed into this channel, in an increasing ratio, for national as well as individual improvement, and that it will obviate the necessity which, through the poverty of landlords, or the temporary interests of tenants, has hitherto confined it to such a limited scale, and induced a preference for cheap and superficial, instead of permanent, drainage.

It is well established that drainage improves the climate, as well as the soil—that it is equally conducive to the health of beasts as of man—that it gives us an earlier spring, and brings an earlier harvest by at least ten days—and that it lengthens our summer by enabling us to turn our cattle out earlier and to keep them out later. Drainage also eradicates thistles and other weeds, and aquatic plants—cures and prevents rot in sheep, and brings inert vegetable matter into action. It is not, however, an antidote to poverty in the soil, but only brings it into a state of greater fitness to hold and distribute the proper food of plants.

I and many others, have found that grass land, when drained and immediately broken up and sown with oats, produces, in an ordinary season, a smaller crop, both of straw and grain, than it would have done in an un-

drained state—that this does not hold good with other cereal or pulse crops; and for all bulbous and other root crops, which delight in vegetable matter, drainage, is equal to an ordinary manuring, even the first year, and the soil is ever afterwards much more grateful for manure.

Nearly all manures are inoperative on wet land, and lime actually injures it. Wet clay lands are almost worthless until drained, but none are more grateful for drainage and manure. Many porous and gravelly soils are also much benefited by drainage, as I have proved in many cases where it was supposed that drainage was not required. Much stagnant water lies under such soils unseen and unsuspected, and no cereal, pulse, or root crop is safe from its injurious influence until it is removed.

The working of land is also much easier after drainage, though the first plowing will generally be found more difficult, in consequence of the contraction of the soil; but immediately afterwards it produces amelioration and facilitates disintegration.

The want of drainage on wet land being thus admitted to be a complete barrier to agricultural improvement, I shall now endeavor to explain the principles on which drainage ought to be conducted. I must beg you, at the same time, to bear in mind what I have found during thirteen years' experience, that we must occasionally deviate in our practice to suit locality and other circumstances. Such deviation, however, is seldom caused by the want of *fall*, for in almost all cases a suitable out-fall *can* be obtained, and I would prefer a nearly dead level to giving up an inch of the depth I wish to obtain.

I put the above remark in, as a saving clause, in case any discrepancy between my practice and principles may be discovered in the extensive operations which I am now conducting for Mr. Neeld.

In the wet climate of the west of England land requires more drainage than similar soil on the east coast, where the climate is drier; for it is advantageous to remove by filtration through drains—on the principle of irrigation—as much as possible of the water that falls on the surface, and to allow as little of it as possible to be carried off by evaporation. You will the more readily perceive this by bearing in mind that rain penetrating

the soil carries ammonia and warmth along with it, to nourish and stimulate the growing plants; but what can not escape by percolation becomes stagnant and injures vegetation; or goes off by evaporation, thereby lowering the temperature of the soil and the surrounding atmosphere; for it has been found, by actual experiment, that rain of an average temperature falling in summer *raises* the heat of the ground three degrees for seven inches in depth; but, if carried off by evaporation instead of by drains, it lowers it, for the same depth, about three degrees below the temperature at which it stood when the rain began to fall. Now, as the average quantity of rain falling annually in England over an acre of land is about 110,000 cubic feet, equal to 3,000 tons, or nearly 8½ tons per acre per day, you will see the importance of drawing this off by drains, instead of allowing it to escape by evaporation. The importance of drainage is rendered still more striking when we know that five-sixths of the water falling on the surface of *wet land* is carried off by evaporation, and only one-sixth by filtration. This has been proved by Charnock's Meteorological "Tables" published in 1843 or 1844. Therefore, on drained land, every drop of rain that falls carries food and air and warmth to all our cultivated plants; but on *undrained wet land* it produces cold, and promotes the growth of weeds and aquatic plants.

I shall now state a few of the reasons which have induced me to adopt and recommend the practice, generally, of deep drainage. I believe there are few, if any, soils on which it is not more generally applicable, if properly applied, than is usually supposed. I say this, notwithstanding a paper to the contrary, published by Mr. W. B. Webster in the Royal Agricultural Society's Journal a year or two ago, wherein I conceive a very meager and superficial reply is given to the astute and philosophic reasonings and facts of Mr. Parkes, supported as they are by the practical experience and opinions of men of the highest intelligence. I am also disposed to assert that uniform depth of drainage on all soils is more generally applicable than has yet been admitted, for depth is principally intended to counterbalance the power of capillary attraction and absorption, or the action of the earth and atmosphere in drawing up

and holding moisture: these influences being nearly uniform in their action. But I do not contend for a *uniform distance* between the drains, because distance must be dependant on porosity, or the texture of the soil and sub-soil, which vary from the almost impervious clay to the open gravels and running sands. You must here observe the distinction between common attraction and capillary attraction: the first brings moisture from above in the shape of dew, etc., and nourishes plants; the other draws it from below and injures vegetation; and the latter influence being greater in porous than in retentive soils, the porous soils should be drained the deeper of the two, where a distinction is to be made in depth. Capillary attraction is also greater in an open than in a covered drain, as may, for example, be seen by the moisture which rises up the sides of an open ditch, or around a common pond, and it is therefore unnecessary to keep drains open for a time after they are out, as they sometimes are, to allow them to "draw," as they will "draw" more rapidly, and retain the water below more effectually, when covered than when open. Further, capillary attraction and absorption have the power of drawing water lying at a depth of four feet below the surface, about twelve inches above its bed in porous, and ten in clay soils.

An allowance in depth must also be made for the subsidence of land after drainage; in proof of which, I have laid upon the table a letter from one of the largest occupiers of land in the Lothians, stating that above 100 miles of drains put down under my superintendence 10 and 12 years ago, at depths varying from 27 to 36 inches, are now being taken up and relaid from 42 to 48 inches deep, in consequence of its having been found that they had been raised, through such subsidence, to within 20 and 30 inches of the surface. The subsidence of soils will of course vary; as, for instance, on soils of a peaty or spongy nature, it will be greater than on clays; and the drains ought to be laid deeper in proportion to its probable extent. Shallow drains, or drains stoned too near the surface, are objectionable, as they carry off the substance of manures, as well as the ammonia contained in the rain water, as proved by analysis of water discharged by such drains, and which water has been fre-

quently found to contain a considerable quantity of nutritative matter; whereas, the water discharged from deep drains is perfectly pure, having left all its good properties behind it.

Deep drains, likewise remove stagnant water from below, which shallow drains do not, and they are more secure from being injured by the roots of trees, sediment, fungi, etc., and also less liable to be burst by severe frosts or other causes.

I must also add, that no description of drainage can fairly be criticised until it has been at least twelve months in operation.

The above is a brief outline of the principles which I am now acting upon; but although I am able to say that I have found them correct in other localities, and have every confidence in acting upon them in Wiltshire, still my knowledge of the geological character of the districts which I have now to deal with, is not sufficient to entitle me to assert, that I *have* not, or *may* not, put in a single drain at a wrong depth or distance; for I am quite aware that such is of great value as an adjunct to practical experience, and that however clearly established the principal may be upon which we proceed, it must to some extent, be adapted and modified to the locality in which we are to carry it into practical operation.

On the Grittleton estate alone I am now executing for Mr. Neeld permanent drainage at the rate of *three* miles per day, equal to 18 miles per week, or 900 miles a year. In the course of these operations I have met with a greater variety of sub-soils than I supposed to exist in any one district—namely, clay, quick and solid sands, gravel, stone brash, and sand stone and solid rock. The depth of the drains varies from 3 to 5½ feet; the distance between the drains, from 20 to 60 feet; the 3 feet drains have only been adopted in clay soils and where old furrows come in the line of the drains, which will leave the drains about 3½ to 4 feet deep when the land is level. The tools which are used consists of three sets, adapted, respectively, for clay and sand, for loose stones and brash, and for moorband pan and solid rock: they consist of turf-knife, a common spade, two bottoming bits, two crumbers or narrow scoops of different widths, a narrow shovel, a pick, a rock-chopper, and a pipe-

layer. In addition, I employ a spirit or a mason's level, a drain guage, a pipe-holder for drain mouths, wire gratings to keep out vermin, and also rings for broken stones, if any are required. In all cases I have used circular pipes from $1\frac{1}{2}$ inch to 4 inches in diameter, costing from 14s. to 37s. per 1000, the size of the pipes being always increased in proportion to the accumulation of water. In sand, gravel, and open brash, the ordinary drains are dug from 4 to 5 feet deep and 6 inches wide, and from 30 to 60 feet apart: the conduits in these drains are pipes and collars from $1\frac{1}{2}$ inch to 2 inches in diameter, and, in some cases, clay is placed around them to prevent running sands from silting

them up. In clays the drains are dug from $3\frac{1}{2}$ to $4\frac{1}{2}$ feet deep, and from 20 to 36 feet apart, and just sufficiently wide to admit the pipes, which are $1\frac{1}{2}$ to $1\frac{3}{4}$ inches in diameter, and are laid without collars, and from 4 to 6 inches of stones, broken to pass through a three inch ring, and costing about a farthing per yard, are laid upon them, and the clay is then trodden in over all. The main drains are always four inches deeper than the ordinary drains, and the pipes are from a third larger to double the size; they have also double the quantity of broken stones placed over them, a practice which I am aware is condemned by many; but I think it necessary, and have found it safe.

TRANSPLANTING LARGE TREES.

DR. EDITOR: I am especially obliged to your able correspondent, Dr. Kennicott, for his appeal in behalf of the neglected American plants. He is a man after my own heart. I have often discussed the subject with a lady who has been my most intimate friend for seventeen years. She is not a *Blue-stocking* but she is a perfect *Leather-stocking* on this subject. Not a tree falls before the ax of civilization, but she mourns over it as for a departed friend, not a bird falls before the murderous fowler, but she laments as sincerely as did her great prototype, over the destruction of his favorite pigeons, by the reckless Dick Jones.

I have never known her, however, like him, to get "lost among the clearings," but she complains bitterly that our beautiful prairies, which used in by gone days to be spread out in all their pristine loveliness, are now marred by interminable worm fences, and dirty lanes. For my own part, I do not carry the point so far, but still I would that the sylvan beauties of our land were more generally appreciated by our people.

My experience does not exactly coincide with that of your correspondent, in respect to shade. Three years ago, I procured eighty

white pines, (*pinus strobus*) brought from about sixty miles above on the Wabash. The most of them I planted in a natural grove for the sake of shade, but they all died. Of those I planted in the open ground I lost none, though in other respects they had the same treatment. One lost its leading shoot, and the remaining branches have been trying very hard to elect another leader from among themselves. They have had as much trouble as Massachusetts sometimes has in electing her Congressmen, but from a different cause, I apprehend. They took one, which, like Saul, stood a head and shoulders above all the others, but it is very slow in assuming an erect position, with all the help I can give it. These pines belong to the aristocracy. They are the lords of the forest, majestic in mien, and their leaders evidently rule by divine right. Most of our deciduous trees are pure democrats. It is no trouble to elect a leader from among the branches. You may bring one even from the very root, not so with the pines.

I have also a little experience in the way of removing large trees with small roots. In April last I was selling some property belonging to Mrs. Baum, of your Mount Au-

burn, in doing which it became necessary to dedicate some ground for a street, on which stood a pine 10 inches in diameter, and 25 to 30 feet high. It was a very fine tree and a pity to lose it, and I determined to try the experiment of a removal, although the tree was then growing and had made cones an inch long. I procured a strong box, $3\frac{1}{2}$ by 4 feet square and 3 feet deep, with oak corner posts. This was nailed together around the tree, and I commenced digging, and settling the box gradually, sawing off the roots as carefully as possible as we came to them.

Guy ropes were fastened to the tree, at two-thirds its height, (the body and contiguous limbs being protected by old rags,) to prevent the tree from falling. Having settled the top of the box to the surface of the ground I commenced undermining to put a bottom in my box; but before this was accomplished an unfortunate gust of wind upset my tree, box, and all my calculations together. I ought to have had four guy ropes instead of two.

Not being disposed to give it up, I began to consider what could be done next. Upon reflection I thought we had not lost much by the accident, as the box and roots had carried most of the ball of earth with them and had at least given us a fair chance to work at the bottom, though I did not at all like the disturbing of the roots, consequent upon the upset. We managed, however, to keep them as nearly as possible in their natural position by crowding in dirt and old rotten straw, until the bottom was put in and nailed fast.

With a gin we next raised the box containing the ball of earth, and then filled the hole, and laid on planks and backed a wagon under it,—then raised the top by the same means, and placed under it a dray, loaded with hay to protect the branches from injury. and let it down upon its bed, drawing in the branches with cords as far as could be done

without injury to them. The entire load I supposed to weigh not less than three tons, and probably more. With an ox team my tree then set out for its new home, a mile distant, and as it approached with its lively green under a bright sunshine, it looked as if Birnam wood were coming to Dunsinane, but I saw nothing of the weird sisters or Banquo's ghost.

Many came to see the process of removing. All admired my beautiful tree, hoped it would live, but predicted it would die, and I believe most of them thought that green as it was, I was the most verdant myself. But I got it home, and settled it into its place in the same manner it was taken up, and stayed it upright, with four guy ropes, where it stood two days, and then—it blew over again! You may remember the hard winds we had in April, and the stakes were not properly secured. This was a damper, but by this time I was decidedly in earnest. The tree was raised again, and firmly secured in its place; and there it stands on the highest point of Strawberry Hill, a land mark to all the surrounding country. Except on a few twigs injured in the removal, not a spire has withered or changed color. It is extending at the point of every limb—its cones are half grown, and its leading shoot is perfect except a few spires rubbed off by a mocking bird, who has appropriated it to his own especial use, pertinaciously insisting that nothing but the topmost twig will answer his purpose. I like the fellow, but I wish he would choose some other perch for a while.

From this experiment I should say that the removal of a deciduous tree in winter, with the aid of frozen earth, ought to be easily accomplished. One of the most serious difficulties with a large evergreen is that it catches all the wind that is going, and great care is required to secure it in its new position. It must be stayed with ropea, until

roots have grown sufficient to hold it firmly in its place.

I offer my experiment for the encouragement of others who are practicing the noble art of adorning our American homes with our American trees. I do it willingly because of the obligation I feel to many of your correspondents for their valuable hints and suggestions, and I would repay them in kind as I am able.

One thing I would request of your corres-

pondents; that they write over their own signatures. We can find their initials in any child's alphabet, and can feel little interest in them. I like your Dr. Kennicott, he talks practical common sense over his own signature, and I not only approve of his observations in the main, but feel a personal interest in the writer. If ever I go within ten miles of him I shall stop. Yours,

S. B. GOOKINS.

Terre Haute, July 10, 1851.

TRAINING TREES.

To those to whom expense is of little importance, compared with ornamental effect, various modes of training Pears may be suggested; but whatever plan is adopted it will be necessary to procure, in the first instance, plants which can be adapted to the particular system which may be projected. For example, if it is intended to train in the form of a weeping fountain or umbrella, then the young tree must have a straight, clear stem, at least five feet high, which should occupy the center of the circle, and this circle should have an iron frame fastened substantially upon stone or on brick, and cement supports near the surface of the ground. When complete, this frame will exhibit an appearance similar to that of an ordinary striking glass. The system of training presented in this device is to direct the course of the shoots downward, placing them from nine to twelve inches apart. This mode of training has been adopted in many of our best gardens, for it produces an effect in harmony with the geometrical lines, which necessarily prevail in a kitchen gardens. Another plan consists in inverting this form, selecting dwarf plants for the purpose, and in training the shoots upward. Both plans have been found to answer, and the expense in either case is about the same. There are those, however, who prefer to have their iron frames made in the form of a cylinder, planting dwarf trees and training the branches in a spiral manner. This gives a larger extension of branches, and fewer shoots are employed in training. I can bear testimony to this mode answering perfectly, and in a garden having high pre-

tensions to artificial arrangement and skillful management; the effect is both noble and pleasing, and may be maintained at no sacrifice of the crop.

But the most important, as well as most economical arrangement has yet to be mentioned. It is well known in hot weather, and especially when bright sunshine prevails, few individuals are tempted to visit a kitchen garden, owing to the absence of all shade, and the universal exposure to which they are subjected in it. Now, suppose that a center or main walk runs north and south, with borders on either side. From these borders I would recommend an arch to be thrown over the walk, and the trees to be trained over the exterior of the trills, which should form the arch, until the whole was completely enshrouded. This mode of training would be of great importance; for instead of occupying the borders with the trees, the walk alone would be shaded. The advantages of the plan are—economy, the perfect security of the fruit and the facility which it affords of protecting the blossoms from frost in spring. The flavor of the fruit, too, under these conditions, is very superior, at least in the majority of kinds; for they are exposed more freely to air and light on a trellis than against walls, and are less liable to become gritty; experience and constant comparison for many years have fully confirmed this important fact, at least in the climate of London.

—*Gardeners' Chronicle.*

How would this trellis plan answer for Peaches in our uncertain springs, so that a

slight protection could be rendered at small expense, either by mats above, or a little smoke fire below, or even by a tub of water and a wisp of straw, as has been successfully practiced in some parts of the country? Another plan has been proposed to secure a crop of peaches, which consists in setting the trees on either side of a rough board fence of sufficient height, training them in the fan shape, and then using a slight protection from both sun and severe cold by any rude shelter, even corn stalks.

The following method has its advocates, but the pyramid is more natural.

Vase or En Goblet Mode of Training Fruit Trees.

In the gardens of the Luxemburg, at Paris, all the quarters containing fruit trees are surrounded with borders, planted with cherry, plum, and apricot trees, as standards; and some with excellent effect are trained in form of a *vase* or *en goblet*, dwarf, or with a stem five feet or rather more in height. The head is formed hollow, in shape like a goblet, the shoots being annually tied to hoops of wood, adapted to the circumference required to give the desired form. Two hoops are sufficient, the two-year old wood being tied to one; and the equi-distant regulation of the one-year old shoots is effected upon the other. As the vase or goblet widens, of course hoops of

greater circuit must be prepared, either of new materials, or introducing an additional piece. In some instances, the hoops were formed of round [apparently a quarter of an inch] iron rods; but wood is preferable to iron, for vegetation in contact with the latter is apt to be injuriously affected by the rapidity with which it heats and cools. Shoots are apt to spring up in the center of the goblet; but they must be pinched in summer; and so all other irregularities of growth appear to have been. The form is very ornamental; it can be produced at little expense; and the trees were well furnished with fruit buds. Suppose a tree to have six shoots, let them be tied at equal distances to a hoop placed horizontally, and then shortened a few inches above it, or so as to leave them a foot or more in length. From each of these, two shoots may be trained to the outside of a somewhat wider hoop in the following season; and thus by annually introducing hoops of a width proportionately corresponding with the respective diameters intended to be imitated, the desired form will ultimately be produced. The head of the tree will be completely balanced; and the branches will be more nearly equi-distant than they could be by any other mode of training as a standard. I should prefer wooden hoops to iron ones. If weak, or if two or more pieces must be employed for the hoop, its circular form must be preserved by two small rods, secured diametrically across it.—*R. Thompson, in Jour. Hort. Society.*

CURCULIO AND PAVEMENTS.

To the Editor of the Western Horticultural Review:

DEAR SIR: Your correspondent, Mr. Longworth, in your May No., has been pleased to show his spleen at some remarks of mine in the March No. of the Horticulturist, touching the habit of the Curculio. Were I alone the subject of his censure for differing in an opinion with him, I might have taken his advice and waited a "few years' experience," tacitly following my senior * * * * *

But your correspondent paternally comes

down rough shod upon any or all whose experience will not chime in with his. This, allow me to say, is neither good taste, nor does it carry out the leading design of horticultural interchanges of experience for general benefit. To use the language of an intelligent cultivator, under a similar castigation from your correspondent—vide Horticulturist, Vol. 4, page 301,—"he has ridiculously misquoted" to serve his purpose, and

still to weaken the testimony, quotes my remarks, that prior to my present facilities in this cause, I had been confined to a city garden of a few perches of land. Has your correspondent never heard the trite adage "a little farm well tilled?"

But, to the point. I had not supposed your correspondent to have been the so legitimate father of the "*instinct*" proposition, nor the *pistillate* and *staminate* doctrine, as to make it point of duty to cavil with all who may dare to show up these fallacies. The sum and substance of my offense appears to be, in the declaration, that the paving process for the riddance of the curculio proves a failure. Let us examine intelligent authorities upon this subject.

What says Mr. W. H., Cleveland, Horticulturist, Vol. 4, page 301; J. C. H., same Vol. page 244; B., Poughkeepsie, a highly interesting article, same Vol. page 406; and again Mr. Bissell, Horticulturist, Vol. 1, page 310. "I am satisfied that a war of extermination, not of prevention, will be our only hope."

So much for eastern intelligence, whom your correspondent "does his utmost to keep up with, but in vain."

Now turn to the evidence published in the *Western Horticultural Review*. In No. 1 Mr. Buchanan relies entirely upon the *shaking process*, and saves a crop—placing no reliance on pavement, as he shakes off and destroys as many punctured plums from the trees in pavement as from those standing in grass. No. 6, "*Subscriber*" placed a thick coat of cement under 35 trees of fifteen varieties, extending it to the full size of the tree; result, only *two* bushels of fruit. This writer observes, "It is wholly inconsistent with the nature and habits of this insect, to suppose that paving under a few trees will protect the fruit, while others near by are unpaved, for the simple reason, that the cur-

culio attacks nearly every description of fruit." To copy these several writers would occupy more space than would be allotted this article, but it is hoped those persons, and especially your correspondent, interested in this matter of curculio instincts, will not fail to read them.

So much for published evidence to sustain my position. I will now state some further personal observations. Such as can readily be indorsed in almost any city in the Union. In our own city, and in others that I have had personal access to, are many yards, which are wholly paved, either with brick or flag, in which plum trees have for years been growing, and whose fruit has been regularly destroyed by the curculio, rarely leaving a sound fruit to mature. The various remedies of plugging sulphur, sprinkling salts, strong odors, syrenging soap suds, dogs, pigs, chickens, etc., kept about the trees, have been faithfully tried, and with very doubtful success—while many of these cases have since yielded remunerating crops by attacking the enemy direct!!

Others who had determined to save their apricots, nectarins, and choice plums on small trees, have had them entirely encased early in the season, with a light fabric gauze, *mil-lins foundation*, etc., ingeniously and securely put on, and have reaped their labor for their pains only! Hence my conclusions have been strengthened not alone from the few *perches of land*, but by careful and watchful observation of a territory.

It behoves me then to declaim against those who would mislead the uninitiated in this matter. Of the hundreds who grow a few fine fruits, there are but few who either read or write much concerning their culture, and indeed the most dangerous are those merely theoretical writers, fairly demonstrated *Kid glove* horticulturists, who get hold of a dogma having some plausible point in it,

and ride it with an imperturbable tenacity that frequently drives intelligence to the shades.

Yours, etc.,

W. R. COPPOCK.

Longsight Place, near Buffalo, May, 1851.

REMARKS APOLOGETIC.—This communication arrived too late for insertion in the number for which it was written, and a correspondence immediately opened by the Editor respecting some expressions. Owing to family afflictions the writer has been unable to reply to the queries, and the article has

therefore been delayed. It is now produced, as an act of justice to an injured man as he supposes, though I was not aware that the thrust was at him—would that he knew his opponent better—all men have their hobbies, some their amiable weaknesses—we must endeavor to bear with the one and the other when they do not chime in with our own notions—as I shall do with the suggestions above, respecting the strawberries, “the pistillate and staminate doctrine is a fallacy”—I have inserted some stars in the absence of any reply from the writer—as to how the blank should be filled.—ED.

GRAFTING CACTI.

I HAVE observed in the *Sydney Morning Herald*, an account of a very fine specimen of *Cereus flagelli formis*, measuring, if I recollect right, three hundred and sixty feet, and the growth of only three years. I have seen this specimen and many others grown by the same person, and I may say that he is the most successful grower of the commoner varieties of long cacti that I have ever met with. Brown, the man I speak of, grafts, as does every body else here on *cereus triangularis*, and I doubt not but that if tried in England it will be found a far superior stock to the *C. hexagonus* or any other of the slow growing kinds. *Cereus triangularis* is a very common species out of England, in consequence, I suppose, of its extremely hardy constitution and rapid growth; and I would recommend growers of trailing cacti in England to try it as a stock, as soon as possible—it will bear great heat, considerable coolness, any amount of wet (above ground,) and in rich soils will make a shoot of six feet from a cutting of six inches, in one season. The gardener, Brown, who possesses the above mentioned specimen, has a method of inserting the graft, which appeared to me quite novel, and at the same time successful—it amused me very much when I first heard of it; he bores a hole with a gimlet (!) in the stock, and therein inserts the graft. On trying Brown's plan I found it extremely difficult to re-

tain the graft in the hole, in consequence of the confined air forcing it out, and therefore, invented a plan which effectually removed the difficulty; it consists in inserting with the graft a fine tube—the hollow culm of a grass will do, and therewith sucked out the inclosed air and liquid; when the tube is withdrawn the graft is retained, as the dentists say, “on the atmospheric principle,” and there is no bandage required to keep it in its place.

My advice to gardeners in England who wish to procure gigantic specimens of slow growing cacti in a short space of time, is, therefore, to procure plants of *Cereus triangularis*, plant them in any rich soil, give them plenty of heat and water; when high enough stop the shoots in order to make the angles thicker, at last graft as above, at a time when the stock is attempting vigorously to sprout at every eye. As I can not find the paragraph above alluded to, and may be mistaken as to the length of the stock, I send you the dimensions of a plant of my own grafting about six months since. The stock was about six inches long, and had been separated about six months previously, but had been starved until shortly before it was grafted; it was then planted in the hollow stump of a *Eucalyptus*, filled with about equal parts of loam, white ant's nest, (a cellular matter of vegetable origin,) and sheep dung, with about one-tenth part of

burned sheep bones intermixed; the whole well rammed in, in order to facilitate the decomposition of the dung and to prevent shrinkage. The graft was of a hybrid called *C. Mallesonii*, and was three inches long. There are now seventeen shoots, all pushing at the tips; eight of the largest are from twelve to fifteen inches long, and none of them less than eight inches. The original plant with three shoots of about six inches each, was planted in the stump at the same time as the stock, and has barely replaced the shoot I took off to graft. By-the-by, in this climate, mid-winter appears to be the time when *C. speciosissimus* and *C. flagelliformis* make all their growth; *C. mallesonii* also of course; so also *Epiphyllum Ackermanii*. This place is in S. lat. $25^{\circ} 30'$, and there are occasionally some frosts in the flats, but not

enough on the hills to touch the sweet potato vines.—*Gard. Chron.*

J. C. BIDWELL, *New South Wales.*

REMARKS.

To our gardeners who have so constantly cultivated the *Triangularis* for a stock, it will appear singular that the English, whom we are so accustomed to consider ahead of us in gardening, should not before have discovered the great advantage of this stock—they are well set forth. This plan of plug-grafting will probably succeed very well, and is certainly well worthy of adoption on account of its greater neatness. The union in this class of plants appears to be easily effected.—Ed.

PERSPIRATION OF PLANTS.

M. GARREAU's object in the first place was to ascertain the ratio in which the cuticle and covering membrane of plants is able to absorb or give out gaseous matters, what differences exist between the same membrane, on the various parts of a given plant, and how these differences are modified by circumstances. The first series of experiments was made to measure the real porosity of the epidermis, by ascertaining the rate at which endosmosis takes place through it, between various dissimilar fluids. Small portions of the epidermis of different plants, carefully prepared, were cemented to the end of glass tubes, a weak solution of sugar was then poured into the tube, the lower end of which was thus closed by the film of vegetable membrane, and the tube was then immersed for a given number of hours in some other liquid, after which the quantity of the latter drawn through the membrane by endosmosis, was carefully measured.

The result of these experiments showed that the epidermis of old leaves permitted little or no endosmosis, whilst that of young

leaves allowed it to a very sensible degree; a fact apparently caused by the considerable quantity of oleaginous matter, which covers and impregnates the epidermis of the former. On comparing together the epidermis taken from different parts of the same leaf it was found that it varied considerably in its relations to this passage of fluid; the epidermis of the nerves, and of the lower part of the leaves, nearest the leaf-stalk being those which permitted it most freely. An epidermis, which does not allow of endosmosis in its natural state, becomes permeable to liquids, when it has been washed with ether, solution of soap, or in some cases even with distilled water alone. These effects are quite independent of the action of the stomata, and may be observed quite as well with a membrane wholly destitute of these openings. The fact that the epidermis of leaves will not permit the passage of water in their natural state, but will do so when the greasy matter which coats their surface is artificially removed, may be proved by immersing a faded leaf for some hours in

water, keeping the whole of the leaf-stalk out of the fluid, it will absorb little or no water; but if it has been previously washed with soap in distilled water, it will then be able to absorb a very notable quantity of water in which it is subsequently immersed. This absorption is found to be quite as great in those leaves which are furnished with very few stomata, as it is in those which are furnished with many, provided the washing be carefully conducted, and all pressure avoided which would cause the forcible introduction of water through the stomata.

The chief conclusions to which Mr. Garreau arrives, as the result of these and a number of similar experiments, are as follows:—Firstly, that the cuticle of plants possesses the power of allowing the endosmosis to take place whilst the parts are young, but that it loses it as they grow old. Secondly, that this power is in proportion to the quantity of oleaginous matter which exists in the cuticle, being greatest in those membranes which contain least fatty matter, or in which it has been artificially removed by washing. Thirdly, that the cuticle which covers the upper surface of the nerves, and particularly that which clothes the axillary part of the leaf-stalk, is that which permits the most abundant endosmosis. Fourthly, that the epidermis sometimes interferes with this power of the cuticle, because plants which have no epidermis permit endosmosis to a remarkable extent; and young bark which has this organ, permits much less endosmosis than that which is without it; and lastly, that if simple washing with distilled water is able to increase the absorbent power of leaves it is plain that rain water must produce the same effect.

These results certainly are highly interesting, and unquestionably point to a new and hitherto unsuspected office of rain; they show the importance of keeping the surface

of plants clean, and lead to numerous useful hints to the practical gardener. We must, however, confess that we do not feel altogether satisfied with some of the experiments because we are not quite sure that it is fair to compare the endosmosis or passage of water through a membrane, with the gaseous transpiration which would occur through the same; because the condition most favorable to the one are not necessarily also always those best suited to the other. The experiments of the author do not bear upon this question; he merely shows that such vegetable tissue is really permeable to carbonic acid, but does not by direct experiment prove that this permeability is increased by any definite ratio by washing. The author endeavors to prove that carbonic acid gas is able to pass through the cuticle of plants which have no stomata, by referring to the growth of water plants, which are without them; and by an experiment in which a portion of lime water was inclosed in a tub, the end of which was covered with a small piece of such a membrane, and the tub then plunged for some hours in an atmosphere of carbonic acid; under these circumstances the gas penetrated the membrane and rendered the lime water turbid. This experiment, however, is by no means quite unexceptionable, because the question is not whether pure carbonic acid will pass through the membrane and mix with common air on the other side, but rather whether common air, containing one per cent. of carbonic acid will so pass through to mix with air containing no carbonic acid. It is evident that the gradual filling up of the pores with oleaginous or resinous matter, which destroys the power of permitting endosmosis, does not necessarily also prevent the cuticles from absorbing carbonic acid, and indeed M. Garreau says this himself, for he observes that a cuticle which has lost the power of transmit-

ting water may, nevertheless, be permeable to that of gas.

The second division of the paper contains a very valuable and careful series of experiments on the evaporation of water from the two surfaces of the leaf, and on the emission of carbonic acid from leaves. In those experiments, leaves grown on healthy plants were selected, and a circular portion inclosed between two closely fitting glass receivers, so arranged that the leaf formed the division between the two glasses—the upper surface was in the one glass, whilst the under surface was in the other glass. The quantity of moisture given off was ascertained by placing in each glass a weighed portion of dry chloride of calcium, which being hygroscopic, or very greedy of moisture, would absorb all the vapor as fast as the surface of the leaves gave it out. The result of these experiments is that the lower surface of the leaves gives off, from an equal quantity, three times as much as the upper surface does; sometimes the proportion is as high as five to one; and the ratio is quite independent of the position of the leaf itself. This exhalation of water has some connection with the number and size of the stomata, but is by no means wholly dependent on it, as there is evidently a large quantity of water given off independently of them. The evaporation is most abundant along the course of the nerves and in those parts of the epidermis, on which there is the least quantity of oily matter.

As by the experiments already mentioned, it has been shown that the transmission of water is greatly checked by the accumulation of oil and resin in the epidermis, it might naturally be expected that the perspiration or evaporation of water would likewise be diminished by the same cause. The experiments made with a view of ascertaining the correctness of this supposition, con-

sisted chiefly in exposing the leaves of different plants, the exact weight of which is known, to the air, and by subsequently weighing them again, observing the quantity of water which they had lost, and consequently the rate at which they were able to give off water. It was found in every case that cleansing, or washing with soap and water increased their power of evaporation to a considerable extent.

The emission of carbonic acid by the leaves of plants, under certain conditions, was first ascertained by de Saussure, but since his first experiments, made half a century ago, no one has attempted to measure exactly the quantity of this gas which leaves give out; the careful and exact experiments of M. Garreau on this point are, therefore, of great value. He employed the same sort of apparatus for this purpose, which has already been mentioned, as being used in estimating the evaporation of moisture from the upper and lower surfaces of leaves; namely, two circular glass vessels, which being applied respectively to the upper and the under sides of the leaf, inclosed a circular disk of the leaf between them, in a way very convenient for the purpose of the observer. In these experiments, however, in place of using dried chloride of calcium, a portion of lime water was used, and the chalk formed in it by the absorption of carbonic acid, subsequently weighed. The general results of these experiments are, that in the shade or diffused daylight, no carbonic acid is evolved by the leaves; that in the night it is given out by both surfaces, but in a greater quantity from the lower than from the upper surface; and that when exposed to the influence of a very bright and hot sunshine, so that the rate of evaporation is very rapid, carbonic acid is likewise given off. In the latter case, the quantity of gas thus evolved is comparatively small, and by far the larger portion of it is given off by the

lower surface of the leaves. It also appears that the proportion of carbonic acid given off by different leaves, bears a closer relation to the number and size of the stomata than the proportion of water which the leaves are able to evaporate does.

All these experiments of M. Garreau teach us this fact, that under ordinary circumstances the growth of a plant causes the formation and deposition of certain substances, which in time fill up its pores, check perspiration, and consequently interferes with the nourishment and further growth of the plant.

On the one hand, there can be little doubt that in very hot weather these matters must sometimes be useful in checking extreme perspiration, and in diminishing for the time the powers of the plant to absorb too much food from the air, or to part with water and carbonic acid too rapidly. On the other hand, the effect of rain must be to wash away a portion of these deposits, and so to favor the perspiration and consequent growth of the plant. Lastly, as the more heat a plant is exposed to, the more it perspires, and the faster it grows, the greater will be the tendency to fill up the pores; so it follows that when plants are exposed to great heat in a close house, and not in any way artificially washed or syringed, they are placed in an unnatural condition, and the very care of the gardener defeats, to some extent, the object which he has in view.

REMARKS.—This article contains many very useful hints for the practical gardener, who should not turn away from it as too scientific and learned. There is necessarily a language peculiar to the investigation of philosophical subjects—new ideas are evolved which require new words to express them; for instance, the transmission of two fluids or their contained elements through membranes, commonly air tight as well as water tight, is a new fact and no word will better express the idea than *endosmosis*, which has been universally adopted. This process should, however, be explained as occurring between gasses or liquids which have an affinity or attraction for one another, influenced, perhaps, by vitality.

Every gardener knows the benefit of syringing his plants, but it is satisfactory to know why and how this process acts advantageously. And how wonderful, that while the clean young leaves should afford the best means for the transmission of the carbonic acid gas, the riper leaves, later in the season, when endued with their secretions should be able to prevent the excessive evaporation of the sap which would occur in the dry weather. Still more singular is the fact which is also well established, that many plants which belong to the most arid and hot climates, where evaporation is most severe, should be endued with the thickest and most impenetrable skins—such, for instance, as the Cactus in its varied forms, and the tribe of Aloe.—ED.

LETTER FROM DR. DAY.

Pattersonville, La., May 8, 1851.

DR. WARDER: I must return you my thanks for your kindness in sending me your most excellent periodical upon horticulture. I at first thought its advantages and interests would be confined, on account of its location to the northern and western states, but I am

happy to find many pieces and much matter in it of the deepest interest to the southern horticulturist. I think it will wake up in the people of the sunny south, a spirit of zeal and industry in this woefully neglected department of life, and by that means, in a few years, we shall be blessed with all the

rich and luscious fruits which for so long a period, have been exclusively the blessings of our more northern neighbors. I have been much interested with your articles upon "root pruning" and the mode of grafting for "dwarf pears." I hope to see other communications upon the same subjects, with explicit and minute details as to the mode and time of operation, etc. I would be pleased also, Dr., to receive through the "Western Horticultural Review" a plain description of the mode, extent and time of pruning vines. I have some of the "Isabella" variety, in the third year's growth, that now have many large and full bunches—very thrifty—and apparently doing finely. You will, doubtless, recollect, when on a short visit at my house, during your flying sojourn to Attakapas, in the spring of 1850, the little old ugly looking pear tree, standing in my garden, which I told you had never borne. At your suggestion, during the summer, I removed in various places over its trunk pieces of bark two inches by six. This spring, for the first, it had a few flowers, which, however, were cast without resulting in fruit. Perhaps the same experiment carried further, might, another year, be crowned with success. I must here tell you one thing, perhaps you or your correspondents may have some experience in the matter, if so it would be well to publish it for the benefit of others. I have two large

"Pecan" trees, which have never borne fruit. They are much larger than another tree on the same lot, that has been yielding fruit for five years. Last summer I determined to bore holes through their trunks—accordingly with a large auger, I had two holes bored through each tree some three feet above the ground, and one foot apart. This spring the trees are filled with bloom, and should it result in a fine crop of Pecans, you shall be duly notified. I was led to this from a fact which I observed while a boy, in Maryland. My father had in his garden as large and fine an Apricot tree as I recollect ever to have seen. There it stood, however, year after year, notwithstanding every expedient to make it fruitful, without bearing any fruit at all. It was suggested by some one, that he should bore its body with holes, he did so, and the next year it bloomed, and formed fruit—but it did not mature. He again bored additional holes—and the next year it was filled with the most delicious fruit I ever tasted. It was still bearing and doing well, when I left there in 1837. Now, whether the boring of holes was the cause of this agreeable change in the habits of the tree, or whether it was a mere coincidence, or if it was the result of the boring, what was its *modus operandi*, I am totally in the dark.

Yours, truly,

RICHARD H. DAY.

LETTER FROM H. N. GILLETT.

Evergreens, May 5, 1851.

FRIEND WARDER,—*Dear Doctor:* I feel quite confident you will not rejoice at our calamities, but may, nevertheless, feel anxious to know what the present prospects are for fruit, in this usually favored portion of southern Ohio. Up to May 1st, (notwithstanding the numerous frosts during the cold

month of April), the prospects for an abundant fruit crop was never better, except: peaches, a goodly portion of which had been winter-killed. Young thrifty trees suffered much worse than old ones, as the sap had commenced circulating more freely during the warm weather in January.

My prospects for an abundant crop of:

pears, plums, cherries and gooseberries was never so good, but truly no one knows what a day may bring forth; the weather turned cold on the first, attended with a blighting wind which continued to blow all night, next morning everything in the fruit and vegetable line was frozen hard to the bone.

Ice formed half an inch thick on shallow water, the ground was frozen quite hard. The forest trees were generally in full foliage, many sorts are destitute of a green leaf. Peaches, plums and cherries were as large as blue bird's eggs, not a live one to be found as yet. My May-Queen apples measured two and one-fourth inches in circumference, and were as soft as if they had been well boiled. About three-fourths of my gooseberries and strawberries are killed. Grapes injured, some sorts badly. Rome Beauty, and Rawle's Janet not done blooming, and will probably produce a partial crop of apples despite of frost. A few more such seasons will convince fruit growers of one important fact, which is, that the Rome Beauty (as I have stated on former occasions) is bound to become the most popular and profitable apple in the west.

I had a very pretty patch of volunteer potatoes of an unusually early sort which I produced some ten years ago from seed, they were from ten to twelve inches high, and had already formed tubers in abundance, some of which were as large as hulled walnuts, they were killed to the ground.

I did not understand you and Mr. Sleath aright, when one of you said the Lenoir was Herbemont and the Herbemont was Lenoir. I did not understand that they were identical, but, that their names had become changed, which will account for my ordering cuttings of you.

The season thus far has been very unfavorable for grafts and cuttings, but I believe I shall succeed in getting more or less of

each sort to grow that I got at Cincinnati; the peaches from friend Byram, of Louisville, look doubtful, the grafts had become shriveled, and the sap of the stocks upon which I worked them, in full circulation when the work was done. I shall regret very much, a failure of those sorts, as they were presented by a new friend, for whose acquaintance I am indebted to you.

I did intend to have written a short communication ere this for the Review, but a busier body you never saw, than I have been ever since I came home, first digging and lifting trees when I should have been grafting; then grafting when I should have been farming; and then farming, gardening, pruning and fencing all together; scarcely time to do anything aright. By-the-by, where is my April number of the Review, has the Doctor forgotten to mail it, or has the mail forgot to bring it? It has not reached Quaker Bottom as yet. Truly yours,

H. N. GILLET.

P. S.—I am unable to scare up a sheet of writing paper or an envelop, and have no time at present to attempt an article for the Review, and last, but not least, have not as yet had time to hunt up a single subscriber for your paper, but I am bound to do it.

Please send me by S. B. Byron, two or three of the best Dahlias you can find. Red and yellow are preferable, as I have fine white and variegated sorts. G.

REMARKS.

MANY thanks to friend Gillett for his handsome present of trees and plants, sent last spring, and again for this account of the frost; though it has been mislaid a long while it is still interesting. The correspondence of friends who can sympathize in our pursuits is always agreeable, and gladly received.—ED.

ARRANGEMENT OF FLOWER BEDS.

THE beauty and interest which a garden affords depend greatly upon the disposition of its individual parts, even the arranging and planting of a single bed require experienced taste, in order to produce effective display. Take, for example, a rose bed; imagine the kinds to be indiscriminately mixed, and no attention to have been paid to their respective lights, and the effect produced by such a medley assemblage will be immediately felt by any person possessing taste, and accustomed to observation. Let us further suppose such a bed to be circular, and the effect will be as bad as it well could be, unless the object aimed at was to represent wild nature. The taller plants should have been placed in the center, and the others arranged so as gradually to fall to the outer rim. This arrangement would advance us a step; but let us proceed further, and dispose of the trees in zones or circles. In this way we give the bed the expression of design. For be it clearly understood that we are discussing gardening in an artificial sense. Now, let us go a little further still, and consider whether there be not yet room for improvement; suppose we plant one color in the center circle, and so change each circle until we reach the outer one. By such a classification we add color as well as design; but imagine the colors to be so arranged that another important feature is produced, viz: contrast, and the picture becomes still further improved, though not yet finished. Would not an edging render the whole more complete? The beauty and brilliancy of the rose would be singularly improved, and relieved by an ever-green margin. This would in some measure, help as it were, to lift the group from the earth, and place it nearer the eye. This edging may be of Ivy or *Cotoneaster microphylla*, or *Pernettya mucronata*, or in fact any low dwarf ever-green shrub kept shorn into a formal rim.

In the above I have shown how much beauty may be exhibited, even in a circular bed, by the exercise of a little taste and forethought; but these simple principles are by no means confined to a rose bed; they can be carried out in every matter relating to the arrangement of a garden, so that unity and comprehensiveness of design may char-

acterize the whole. When a contrary state of things prevail, delight vanishes, confusion takes the place of order, disgust that of pleasure; and instead of the most charming of all pursuits, contributing to relieve the man of business from the oppressions and satieties of mind usually resulting from close application, he abandons the whole in utter dismay and hopelessness.

The rage which has existed of late years for massing plants in beds, has, unfortunately, reached even the villa garden. I say unfortunately, because it detracts from that variety and interest which arises from more general and varied collections. It may be imagined, that what is desirable in extensive gardens, must be equally so in those of limited extent; but this is a mistake, because in the former there is ample room for the display of all kinds of ornamental flowering plants, while in the latter the great art is to bring into so limited a space as much variety as possible, without producing confusion. What are termed herbaceous and Alpine plants, have of late years been greatly neglected, arising principally from the prevalence of the taste for massing and grouping individual varieties, so as to produce a blaze of flowers at a particular season. The nakedness of such gardens during a greater portion of the year can not be denied, unless the beds are supplied with dwarf flowering shrubs, the expense of which, under the circumstances, few are induced to incur. Gardens so laid out, should have at least three seasons, viz: the summer display of flowering things, to be succeeded by dwarf ornamental plants; then a spring season of bloom by means of bulbs. A geometrical garden so managed, has doubtless a very striking effect, but this can only be carried out at great labor and much expense. I question however, whether such collective masses ever impart to the man of taste, the enjoyment which a more varied arrangement secures. I should, therefore, urge the occupiers of such gardens to employ a greater number of the different kinds of hardy flowering herbaceous plants, in order that both in winter and summer the garden may be kept to a great extent continually gay. Such an arrangement will always present new charms, whereas,

the first frosty morning sweeps off the entire beauty of geometrical massing, and leaves the whole a mournful wreck, and such a display can only be reproduced after a lapse of many months.

But the arrangement I am advocating has another recommendation, viz: it is by far the least expensive, both to furnish and maintain. The former requires glass frames or pits to protect the young stock for the succeeding season, entailing continued covering and attention in securing the plants from the inclemency of the weather throughout the

whole winter and spring. No such care or expense is necessary in the case of hardy plants, and the immense variety of these which are easily procurable, and which will stand all weathers, gives an opportunity for selecting to suit all tastes and situations. If these are planted with some regard to their respective heights and time of flowering, I apprehend that no massing will give the proprietor of a small residence a similar amount of pleasure.

PHARO.

Gardeners' Chronicle.

WATER EXHALED BY PLANTS.

WE copy the following article from the *Rural New Yorker*, which paper we have often had occasion to speak well of, and it still continues to deserve the high praise we have given it.

In addition to the rationale there given for the receipt of water by the soil, we would remind our readers of the cause why the soil absorbs water so readily, or rather why the atmosphere deposits such large quantities besides those received by rains. We have had occasion before to state, that by evaporating water from any surface, you cool the mass beneath, and thus the water passing off from the surface of plants by the action of the sun, must necessarily, as it assumes the form of vapor, abstract heat from the plant just as evaporation of water from the hair cools the head. The plant thus cooled is continually abstracting heat by its roots from the earth, and thus the temperature of the earth is lessened. All moisture not resident in and about the earth's surface, must be in the atmosphere in the form of vapor, and in warm weather generally invisible. The atmosphere enters the soil and continually deposits moisture on the cooler surface of its particles, as a piece of cold iron perfectly dry when taken from an ice house will be immediately covered with drops of water when presented to the outside atmosphere, although this atmosphere may seem to be more dry than that of the ice house. Thus it will be seen that plants may throw off the enormous quantities of water stated below, notwithstanding that the quantity may

seem to exceed that known to be supplied by rains.—*Working Farmer.*

According to Hales, a sunflower evaporated, daily, 1.25 lb. of water. Allowing 10,000 plants to the old Hessian acre, they would, in 120 days, exhale 1,500,000 lbs. of water.

A cabbage exhales in twelve hours of the day 1 lb. 6 oz. of water. The average number of plants per acre, would, in 120 days, exhale 1,200,000 lbs.

A dwarf pear tree exhales in ten hours of the day, 15 lbs. of water. The trees of an acre would exhale in 120 days, 3,600,000 lbs. of water; and one-third may be added for the grass among the trees, making for the acre nearly 5,000,000 lbs. of water.

An acre of 40,000 square feet planted with hops, exhales in 120 days, 4,250,000 lbs. of water through the hops alone.

A square foot of soil covered with *Poa annua* exhales, according to Schubler, daily, on an average during the summer, 33.12 cubic inches of water. Thus, an acre of meadow land, about 6,000,000 lbs.

According to Schubler there falls in England upon the acre of 40,000 square feet, at the utmost during the 120 days of summer, 1,600,000 lbs. of water. According to the researches of Dalton and others, a third part at least, of this water flows in the rivers. A considerable quantity evaporates immediately. Thus it appears, at most, there is left on the acre only about 800,000 lbs. of water disposable for plants and for evaporation. The evaporation of the soil itself is estimated to

amount to 2,000,000 lbs. per acre in 120 days.

We may learn from these calculations that the quantity of rain which falls upon a given surface is not a measure of its fruitfulness, but the quantity of moisture, the absolute and relative quantity of vapor which yearly, and especially during those months which are most important for vegetation, is contained in the atmosphere.

It is certain then, that the soil, in order to nourish plants, must absorb a large quantity of water from the atmosphere, and, consequently, must possess the necessary properties for that purpose. This property is only possessed to a great extent among the original constituents of the soil, by clay, so that a soil free from clay is unfruitful—or is in

other words less productive. The primitive vegetation of the earth enriched the soil by its death with a substance (*humus*) which also possesses this property, and which, in proportion to its abundance, produces a luxuriant vegetation, without affording from its own substance any part of the nourishment of the plant. In this way the capacity of the soil to support prolific vegetation is dependent on those climatic influences which rapidly determine the death of plants, and convert them into *humus*. Herein we see the foundation of the variety of the vegetation of different parts of the earth, and the determining cause of the richness of a tropical vegetation.

We have compiled the above from *Schleiden's Principles of Botany*.

MULCHING LAND.

THIS practice is being more generally adopted, and consists in covering the ground with a light coating of salt-hay or other refuse material. The advantage arising from this practice, may be thus understood:—

The dews and rains in falling, bring with them Ammonia and Carbonic acid gas, both necessary to the growth of plants. The water passes through the mulch into the soil, and is protected from being evaporated by the direct influence of the sun by the mulch, and thus the soil is continually storing up these gasses and retaining them for the use of plants, in addition to which, the water itself is held in the soil instead of evaporating from the surface.

In extreme hot weather, the evaporation of the slight quantity of moisture held by the mulch from its upper surface, cools the ground below and prevents the ill effects arising from excessive heat, while in cooler weather this effect is lessened as the evaporation is less. This phenomena may be thus understood:—*As bodies increase in size, their capacity for heat increases in like proportion.* Thus; if we wet our head with a quantity of water (say one cubic inch) and then fan it, the water in becoming vapor will increase in size more than seventeen hundred times, and in so doing will receive seventeen hundred times as much heat as was contained in the water before its evaporation, and this

heat being abstracted from the nearest hot object, the head, leaves it cooled. Water may be cooled by wrapping a wet cloth outside a jug and placing it in a draft of air; the evaporation of the water from the cloth cools the water in the jug by abstracting its heat. Ice may be made by evaporating ether from the surface of water.

During the autumn, while large amounts of both vegetable and animal matters are undergoing decay, the atmosphere is highly charged with fertilizing gasses, and the mulched lands readily receive these gasses. Clayey soils are prevented from baking and cracking by summer heat, while sandy soils retain their moisture, and many weeds die out for want of the direct action of the sun.

During winter the mulch answers another purpose. The immediate surface being partially protected from frost, permits falling showers to percolate below the surface before freezing, and hence the spaces between surface particles are not filled with ice so as to prevent the ammonia from melting snows from entering the soil, at the same time the surface not being over charged with moisture does not *heave* by freezing, and the crops are not thrown out.

Many farmers spread manures in the fall and plow them under in spring, and thus mistake the effect produced by the fibrous

matter contained in the manure acting as a mulch, for the direct action of the soluble parts of the manure. Such practice is wrong; a slight mulching of comparatively valueless materials would be equally effective, as most of the soluble and valuable parts of the ammonia is lost by evaporation, and only the benefits as a mulch result from such practice. If manures are used in the fall, they should be plowed deeply under, and mulching may be applied in addition, if necessary, or the land may be mulched during winter and manured in spring. The application of mulch around fruit trees is much resorted to in Massachusetts and elsewhere, and with material benefit in causing early fruiting and supply of moisture. The full benefit can only be derived, by mulching lands which are free from standing water in excess, and it is for this reason that under-drained and sub-soiled lands repay the farmer so well for mulching. The following article is taken from the *Germanstown Telegraph*.

Shade as a Fertilizer: A good article on this subject by J. B. Garber. It is an established fact in agriculture, that the protection of the ground against the extreme heat of summer and extreme cold of winter, is of essential benefit to it, showing itself in increased growth and production. Of the advantage of "mulching" young trees, as well as raspberry and vine borders, by the application of

any decomposable substance, as straw, long manure, leaves, grass, cornstalks, etc., etc., every gardener and nurseryman is aware. The object, however, of Mr. Garber, is to show that *shading farming ground*, somewhat after the same fashion, is equally beneficial, and in proof of it, gives us the following experiment:

"Having a large quantity of wheat straw for which I had neither use, nor room for storage, I, in last January, concluded to draw it on a field that had been laid down to grass, timothy and clover, two years previously. The field contained about ten acres, and we spread over the ground as evenly as we could, some twelve or fifteen two horse loads. It was regarded at the time by many persons, as a novel mode of disposing of the surplus straw, yet generally believed to be advantageous. This spring it could plainly be seen to have the effect of starting the grass earlier than in fields adjacent, and causing it to grow with greater vigor. I am fully convinced, that straw spread over the ground at the commencement of winter would in a great measure prevent the frost from heaving, or lifting the soil, which from the alternate freezing and thawing, frequently occasions the destruction of wheat, clover, etc., the frost drawing the plants out of the ground, and leaving them exposed on the surface. A light covering of straw would in a great measure prevent this."

Working Farmer.

THE CHINESE PRIMULA.

At a season when all nature appears dull and almost inanimate, this beautiful plant makes our green houses lively and attractive; and much has been said respecting its culture. No mode of treatment which I have seen advocated appears to me to possess advantages like that which I have been in the habit of pursuing. I sow the seed in a gentle heat in the beginning of April. As soon as the plants are up and sufficiently large to handle, I plant them out under hand glasses at the bottom of a west wall, and shade them for a few hours during the day while the sun is powerful, giving them now and then a sprinkle with a fine rosed watering pot, and keeping them close. When they begin to

grow the glasses are removed at night, as the dew in the morning greatly strengthens them, and it is astonishing how fast they advance in growth. When they are sufficiently large, I put them in four-inch pots, and place them in a close frame until they have become established a little, after which the lights are drawn off every night in fine weather, and air is given in the daytime by tilting the lights at the back, shading the plants lightly during the hottest part of the day. When the pots have become filled with roots, I repot in six-inch pots, in which they are flowered. When they come into blossom, the most fimbriated and best colored ones are carefully selected and marked. After they

have done blooming, and rested for a short period, the greater portion of the soil is removed from the roots, which are cut pretty close in; at the same time the stems of the plants are cleared of old leaf stalks and every thing is made clean and neat. They are then repotted in the following compost; equal parts of turfy loam and peat, with a portion of well decomposed cow-dung and silver sand in it. The compost is used in a rough state, with broken crocks below for drainage; and the pots employed vary from six to eight inches in width according to the strength and size of the plants. After potting they are put in a close frame and treated exactly as recommended above. In this way I have grown splendid plants, and some have done better the third year than the second, but I have never tried them for a longer

period. By following the same plan every year, fine plants and good sorts are secured. —*Beck's Florist.*

Chinese Glycine at Home.

ONE plant was in bloom at the Azalea gardens at the time of my visit, which I must notice. It was a specimen of *Glycine sinensis*, in a dwarfed state, growing in a pot. The tree was evidently aged, from the size of its stems. It was about six feet high, the branches came out from the stem in a regular and symmetrical manner, and it had all the appearance of a tree in miniature. Every one of these branches was now loaded with long racemes of pendulous lilac blossoms. These hung down from the horizontal branches, and gave the whole appearance of a floral fountain.—*R. Fortune.*

R H U B A R B .

MR. JOSEPH MYATT, of Deptford, who is celebrated for fine rhubarb, was the first to cultivate it on a large scale. It is now nearly forty years since he first sent his two sons to the Borough Market with five bunches, of which they could only sell three. Next time they took ten bunches with them which were all sold. Mr. Myatt could even then see that Rhubarb would in time, become a public favorite, and the result has proved the correctness of his views, for it is now generally used both by rich and poor; it is no longer called "physic" as it was wont to be in by gone days.

Rhubarb will grow in almost every soil, provided it is rich; but light loam well manured, will always produce a better flavored stalk than a stiff retentive clay. We have had a great deal of rain this winter, and Rhubarb in consequence, is not near as well flavored as in a dry and rather frosty season; the stalks are full of watery juice which the roots have taken up; and in some places the tops of the leaves are beginning to rot among the straw. This has led some market gardeners to adopt means of keeping the roots dry. Mr. Mitchell, of Endfield, has grown his early rhubarb this winter in the following manner: He lifted the roots, packed them with a little mold between them, on the floors of long sheds, and covered the

crowns two feet thick with tree leaves. These produce sufficient heat to bring it forward gently; and I never saw better or finer rhubarb at Christmas. The usual plan of forcing it about London consists in digging long pits to the depth of two or three feet, introducing eighteen inches of hot dung, and then packing the roots closely together in a little mold, covering the crowning with hoops or with six inches of straw; then hurdles or mats, and finishing with six or eight inches of straw, the amount of the latter depending on the severity of the winter. In this way strong well flavored stalks are produced, providing the weather is dry. The color is bright red, and the leaf is always very small. Many prefer forced rhubarb, on account of its tender fiber. No skinning is required, and it is much less acid than that from the natural ground. Those who desire this kind of rhubarb, therefore, might easily obtain it by placing about a barrow full of straw over each crown. This covering would be cheap, and beside bringing it on a little earlier, it would help to manure the ground and keep off frost. Rhubarb-growing out of doors is so simple that little can be said respecting it. The ground being heavily manured, a plant is taken up and divided into as many eyes or buds as it possesses. These are planted four feet apart, and by the

autumn they have produced roots from six to ten pounds weight. The oldest roots are generally taken up for forcing; and by always having a good rotation the grower has the power of continually changing the ground and thus obtaining a heavier crop. The

forced plants will furnish eyes for a continual succession, without growing plants for the purpose, and the eyes may be divided and planted again for a main crop. I practiced this plan on a small scale many years ago.
Gard. Chronicle.

METEOROLOGICAL DISCREPANCIES.

From John Lea.

THE indefatigable observer who furnishes the Meteorological tables for the Cincinnati Gazette and also for the Western Horticultural Review, and whose great accuracy in observing the varying phenomena gives value to the record, was attacked in the Gazette by one "B," who instituted a comparison between the tables of the "clerks of the weather," and finds that they do not exactly correspond in details. This is indeed unfortunate; but B will find that it is not so "easy" a matter for two observers, differently situated, to bring out the same results. The causes of these discrepancies are thus set forth by Mr. Lea in the Cincinnati Gazette:

Messrs. Editors:—Your correspondent B. is desirous of an explanation of the discrepancies which appear in the Meteorological report of Dr. Ray and myself, for the month of May.

When it is understood that Dr. Ray's location is on the Northern skirt of the city, and mine is somewhat central, approaching the Southern side, at more than a mile distant, it will account for the small difference that usually occurs in our monthly means, which amounts to something over 1°. He has somewhat the advantage of me in altitude. It will be conceded that the central part of a large city is warmer than the border, and the border warmer than the country. Thus my thermometer on the memorable morning, of the 2nd May, at sunrise, indicated 32°, that of Mr. Winters (West Fifth street) 28°, Dr. Ray's 27° Mr. Brace, (White Mills,) 24°, Mr. Sleatn, (Bold-face hills,) 22°. Here is a most remarkable disparity; the cold seems to have run in veins, or streaks, which is likewise indicated by some gardeners losing nearly all their fruits and vegetables, while others at a short distance were slightly injured. My thermometer is of "Fisher, Philad.," and I believe Dr. Ray's is of the same maker—they accord with the standard at Washington. I think that my glass is placed in a proper situation, and I invite B., to call and examine it, and compare the indications of others with it.

With regard to the force and direction of the wind, I may say, there are two vanes near by, one on the Burnet House, and the other on the Second Presbyterian Church, neither of which veer in light breezes. I therefore depend on the direction of the smoke, and when there is not wind enough to move the leaves, I record a calm. I invite B. to make his record for any day, and come and compare it with mine.

The difference in the distance between Dr. R., and myself, will make some difference in occasional showers; but the *monthly mean* appears to be about the same. The rain of the evening might be added to that which has fallen through the day, or added to that which fell in the morning after, and make an *apparent* difference only. Allowance must be made for typographical errors. I perceive one of 20° in a report before me. The proofs of my reports are corrected with the utmost care. In connection with this subject, I may be permitted to remark, that there is *one seventh* more rain falls on a given surface at the ground, in the Court of the Observatory at Paris, than falls on the same surface at the top.

JOHN LEA.

From Dr. G. Engelmann.

DR. WARDER,—*Dear sir:* My meteorological observations show a small excess of the mean temperature of St. Louis, Mo., over that of your city. As a controversy has arisen about this point, and as my results have been ascribed to an incomplete method of computation, I was gratified to find in your valuable journal a table which will permit me to compare the relative climate of our cities, by another scale, and which leads to the same result.

It appears from the tables published, page 395, that in thirty years the peach trees have been in bloom on an average April 11th; while in St. Louis in an average of sixteen years they blossomed on April 9th. But a still more accurate result will be arrived at by comparing the same years, and here, I find that in the ten years which I only can compare, your peach trees were in bloom April 13, and ours about St. Louis April 8.

Admitting that the date of the blossoming of a tree is something not easily definitely arrived at, I find the coincidence remarkable

that Mr. Jackson's and my observations and notes should always, compute them in whatever way you may, lead to the same result. The first peach blossoms, I find in the mean, about seven days before the majority of peach trees are in full bloom.

A remarkable fact observed by me in St. Louis I find fully corroborated by the Cincinnati observations, that in the whole period of our observations two consecutive years offered the greatest extremes, 1842 was the earliest, and 1843 the latest season; and the

mean of both very nearly corresponds with the means given above.

I will add the remark that my thermometrical results were the means of observations made at sunrise and at 3 P. M.; and not of the highest and lowest temperature of the day; which last method would give a higher and less correct result, nevertheless, I do not doubt that we may find better methods leading to safer conclusions.

Very respectfully,

GEORGE ENGELMANN, M. D.

Letters from the Editor.

NUMBER ONE.—THE LAKE SHORE VISITED.

HAVING heard, read, and seen something of this famous region, which is represented as being so very attractive and desirable, a trip to Cleveland was eagerly embraced to satisfy the laudable desire of a personal inspection. From Cleveland a fine pair of ponies carried us rapidly through Ohio City, and upon the plank road up the lake, along the sand ridge which appears so admirably adapted to fruit growing, on account of its fine soil, and more especially from its proximity to the water, which retards vegetation in the spring, prolongs the season in the autumn, and also protects the developed blossoms from the cutting influence of late spring frosts. This region does not extend very far back from the lake, it is quite a narrow belt that enjoys the exemption, and between the sand ridge and the lake there appeared to be a low swale of cold clayey soil, rather wet, and apparently unfitted for fruit growing.

The first object of Horticultural interest was the foreign grapes, growing thriftily in the gardens of Ohio City, where, indeed, every thing grows well. Leaving the town, some fine rows of locust trees have been

planted—they seem to do very well in their new home—they are not natural to this region.

The nursery established by F. R. Elliott, now in other hands, was soon reached, and the growth of trees in this soil was really astonishing—the thrifty cherries, pears and other fruit trees planted as standards, gave abundant evidence of their adaptation to them. The young cherry trees looked very well, and the evergreens in large quantities appeared to be remarkably well pleased with their change of locality. Many beautiful herbaceous flowering plants enlivened the grounds.

The rustic character of the ornamental work about the cottage and the appropriation of a huge chestnut stump for a garden retreat, gave indications of considerable taste in the proprietor—the stump was hacked into a plain circular bench environing a table made in its center, where a fruit committee might pleasantly discuss the merits of the products of the surrounding trees, while sheltered by a fanciful arbor, covered with clustering vines. The piazza

of the cottage is supported by rough logs to which arching branches are attached in the way of braces, giving the whole a very pretty rustic look. At one side of this house is the prettiest and most successful Privet hedge I have ever seen, it is well clipped, close, neat and decidedly "*prim*"

A little further up the lake is the residence of Mr. Elliott, a very neat cottage, built nearly after the plan to which the premium was awarded by the New York State Agricultural Society, in 1849. It is situated upon the same ridge which is here composed in part of decomposing shale, that with the sand forms a very nice soil for trees, of which there are already a goodly number planted on either side of the house, all appearing remarkably well, though recently set out.

A nice lawn with numerous clumps and single specimens of various ornamental trees and shrubs, stretches away to the north of the house toward the road, and opening a fine prospect to the beautiful lake Erie. This lawn is skirted with the roadway, extending from one gate to the other, and fringed with a double row of dwarfed pears, a fine collection of specimen trees of nearly all the best sorts, or those reputed to be such, many of them were imported, planted only last year and now part of them are bearing specimens of fruit which will enable the owner to begin testing them for this climate and soil.

Among the shrubbery are some fine kinds of ornamental trees, none of which are more beautiful than the pines of various kinds. The roses, too, were blooming finely, and among them were several of the prairie family in flower. none of them, however, promise to surpass the Baltimore Belle and Queen of the Prairies, whatever their originators may promise for them.

A couple of miles further along the same "ridge," after passing several pretty places,

a row of cherry trees arrests the attention, as they are planted along the road side, for the benefit of "the birds and the boys," who are both to learn from this that the benevolent proprietor desires them not to trespass upon the fruits within his inclosures—on the south side of the road is a remarkably neat stone house, embowered in trees and vines, yet looking cheerfully out through them, and irresistibly inviting the horticultural traveler to stop and receive the proffered welcome of that sterling pomologist and successful cultivator, Professor J. P. KIRTLAND, who has done so much to induce the cultivation of superior fruits, besides propagating a taste for natural history in every place where his lot has been cast. To him especially and to his co-laborers, the City of Cleveland is now indebted for the deserved reputation of having the best collections in the western country.

Being Independence day, every body was going to visit the city, or otherwise dispose of themselves in a holiday mood, and we found even the learned Professor, gun in hand, ready for an excursion to the woods in pursuit of his favorite birds and bugs—or butterflies—but all this was gracefully laid aside for the rites of hospitality, while I was severally introduced to his celebrated seedling cherry trees, of which he has raised several that are truly deserving of extended culture. Some that were still in fruit may be mentioned here, and among them the Rockport Bigarreau, Kirtland's Mary, Governor Wood, Black Hawk, and Cleveland, are pre-eminent, not so much for their size alone as for their fine flavor, prolific character, and early bearing. One of the same family of seedlings is not remarkable for early or great productiveness, for though it is one of the largest trees on the place, it has only borne a few fruit as yet. It is pretty generally known perhaps, that all the seeds were taken

from a Yellow Spanish tree, which might have been impregnated in part, by a Black Mazzard on one side, and by a May Duke on the other, and yet the seedlings possess a great variety of character. Mr. Elliott has described all of the kinds that have been considered worthy of names, and has noted them for some years successively, so that he is best qualified to furnish an article upon these cherries, and he has promised to give an account of them for a succeeding number of the Review.

Prof. Kirtland has introduced a great many very beautiful shrubs into his grounds, and among them the *Magnolia Glauca*, blooming at the time of my hurried visit, which was speedily brought to a close, in order to get back in time for the cars.

NUMBER TWO.

CLEVELAND.—TREES AND GARDENS. A NEW CHERRY.

A LONG Rail-road ride of two hundred and fifty-five miles, extending across the great State of Ohio, almost from one extreme corner to another, brings the citizen from the banks of the Ohio within the influence of the Lake shore at the thriving Forest City. He comes, perhaps, at this season, from a region of drought, the parched earth almost denying sustenance to the pastures of the fields he has left; the garden plants suffering and wilting, drooping their heads and hanging down their leaves, and here he finds himself in a different atmosphere; he fancies that the Lake has been giving off its moisture to the surrounding atmosphere, and he finds indeed that the vegetation is fresher and brighter than that he has left behind him. The trees in the streets, and such trees as they are too, and so many of them, look as though they had never known the meaning of the word *dry*, much less the *fact* of *drought*, they look so very green and fresh

that this may well be called the "Forest City." With its beautiful wide rectangular shaded streets, well has it earned the cognomen, and a noble example too, it is, to all its sister cities and towns in the country, west or east. These trees are of various sorts, but chiefly the natives of our own magnificent groves and forests, perhaps too small a proportion of them are evergreens, but these are coming on in the gardens attached to the houses, and they will be ready to fill up the spaces that will be opened for them.

In looking beyond the pretty private gardens that everywhere greet the stranger who wanders about admiring the tasteful residences that are scattered along almost every avenue, if he be in search of commercial gardens where things so pretty may be bought, as well as admired and coveted, the visitor should extend his walk eastwardly beyond the Medical College, on St. Clair street, stopping if he choose, to admire the fine collections of natural history that are ever open to inspection in this fine building. If only and wholly in pursuit of *floral* beauties, however, he will proceed until his senses of sight and smell are agreeably saluted from the grounds of McIntosh & Co., where he will find a choice collection of roses, herbaceous perennials, and annuals, and flowering vines and shrubs in great profusion. The collection of fine roses is one of the very best I have seen any where, and is remarkable for the correctness of the names, in which there is so much confusion in different parts of the country. Mr. M'I. has bestowed a great deal of attention to the nomenclature and propagation of this lovely class of plants, and the result is a reward for his labors. He works a good many kinds as high-standards on different stocks, and as he prefers the French Dog-rose he has cultivated a great many of them from seed. He has also produced some new Prairie roses, some of which

are quite pretty, but he does not press them upon the visitor, and very judiciously remarks, "they are not 'distinct' enough,"—this is often true of new roses that are introduced to us, with high sounding titles, and at high prices. That Mr. Rivers' "distinct" disapproval may have a good effect in diminishing the rage for novelties is devoutly to be wished.

The nursery of fruit and ornamental trees at this establishment is remarkable for its extent, and the fine appearance of the dwarf pear trees that are largely cultivated, and appear very thrifty. Ornamental trees also claim much attention, and here is one of the best specimens of *Magnolia Soulangiana* that I have seen; it is blooming through the summer pretty freely.

The large cherry trees in this region, though they suffer much less from the "bark disease," than with us in the south of Ohio, are still subject to it, and Mr. M'I. believes that knife alits are the best remedy for it, also, the excision of dead parts and grafting wax snugly applied: he has thus saved trees which were reduced to a very narrow slip of sound bark, and has succeeded in restoring them to a healthy condition. One of his men once tried slipping off the outer bark from a healthy young tree, which plan was recommended by a periodical at one time, the under skin turned black, like old leather, and the tree has been stunted ever since. All agree that soon as the rough bark has made its appearance the danger is over; and I was pleased to find some advocates for low branching of the trees so as to shade the trunk from the direct rays of the sun.

The largest collection of old cherry trees which I saw, was at Gallup's Nursery, on the Pittsburgh plank road, about three miles from the city. They make quite an orchard, and yield a considerable revenue—this place reminded me of an eastern orchard. The

portion devoted to pears and peaches conjointly, had been left uncultivated for some years with a view to prevent the sad effects of blight, the result was a diminution of the evil, but at the same time a reduction in the growth of the trees. The ground was this year again plowed with good results as to growth, but with a return of the blight also. The Seckel pear appears less obnoxious to this disease than many other sorts, and the snug rounded tops of the trees were loaded with the promise of many a luscious morceau.

The peach trees bore the appearance of great age and fine health—they were bearing a partial crop, for these grounds are almost beyond the lake influence, and the crops suffered from frost. The health of these old peach trees is attributed to the plan which has been adopted to cheat the Egeria, by heaping up a bank of earth against the bole, from time to time and again removing it in the winter. The nursery grounds contain the usual assortment of fruits and ornamental trees, among the former the cherries are quite numerous and in the latter class the Weeping Willow, Catalpa, and a variety of Balsam poplar, which grows wild on the southern shore of Lake Superior, were conspicuous among the deciduous trees. Evergreens and larches looked very well, and occupied considerable space. To the kind proprietor I was indebted for grafts of a cherry which was new to me, and the true Canada Red apple, which is a great favorite in this latitude, though scarcely known about Cincinnati.

The Catawba and Isabella grapes were growing luxuriantly and bearing well, with no appearance of the "rot" among them—the former does not mature its fruit well, and the latter is the favorite, besides it ripens regularly here and without the green berries, so common an accident in our vineyards, as to have caused its banishment from them.

The strawberry culture is carried on rather extensively by Mr. G., who finds his best return from the old Staminate, Burr's seedling, which he allows to grow quite thickly over the ground—it is so strong a grower that the weeds have no chance at all—the leaves are never either mown or raked off, the winter snows beat them down upon the ground where they lie and protect the fruit from the sand, and during the summer preserve the moisture as well as a coat of mulching. One large bed or square, was planted with Burr's seedlings three years ago, and is still in good bearing, though I thought it too crowded. Hovey's seedling is the only other kind grown at this garden. Mr. G. advocates mulching, and encourages the growth of chickweed among his trees on this account—especially in his orchards.

Riding along this road, we passed some large pear trees in which the blight was making its sad ravages—one very handsome tree of the Windsor or Summer Bell was suffering badly—it was worth to the proprietor forty dollars a year—is not such a crop an evidence of the profitableness of growing fruit? We crossed over from the Pittsburgh road to the Euclid plank road, riding through a beautiful country, part of the time on a ridge where the shales made their appearance in place, from this elevation we could command a lovely inland landscape, over a large extent of cultivated country, with here and there a patch of bracken filled with wild lilies and other pretty flowers, and at one point a large thicket of paw-paws, a rare plant here. At one turn we met with the nursery of Mr. Sturtevant, where a very pleasant reception was proffered by Mrs. S., in the absence of her husband; she enabled me to see the garden and nursery which contains some thriving trees.

In East Cleveland the establishment of W. W. Custead was kindly shown by Mrs. C,

who did the honors admirably. Here is a greenhouse and a square or two of fine roses which always attract my attention—the green houses and their contents were in their summer trim, as was to be expected at this season. The Dahlias appear to do very well here, as the humidity of the atmosphere from the lake is favorable to them, and the frosts of autumn do not appear so early as at some points further south. In this neighborhood attempts are making to cultivate the sweet-potato, but, though they look very promising at this time, the impression prevails that they can not be grown to advantage.

The Chestnuts, Beeches, Oaks, Magnolia acuminata and Maples of this whole region are of so peculiarly rich and deep a green, that they are deserving of especial note. The cause is not well understood—but it is probably owing to excessive healthiness and thrift. Even the Tulipifera, or Tulip-tree was of so dark a color as to puzzle an observer [to recognize it if he were not very familiar with the habit and foliage. One proprietor in Cleveland set out one hundred street trees this season; a praiseworthy act.

A word about the markets, which may generally be taken as an index of the general state of the crops. Fruits are very scarce, Summer Bough apples and other sorts not ripe, and a few unripe pears were seen—currants and gooseberries were still to be found but disappearing, and a few very poor mazzard cherries were to be had on the 27th of July,—at the same time, tomatoes were in considerable quantity, early corn beginning to come in, new potatoes of the finest quality and very good size, and fine cabbage heads, with the other vegetables were abundant.

Another visit must be mentioned: on St. Clair street, lives, an industrious master painter, named Proudfoot, who cultivates some fruits very successfully—parts of his house are covered with a greater profusion of

grapes than I have ever seen. He has the Isabella, and pursues the long plan of training, with spur pruning—the grapes never rot and always ripen evenly—the exposure is southerly. He has also a new seedling cherry,—which promises to be really worthy of note,—it is large, dark red, and very firm fleshed, with a rather small stone, and on the last day of July there were cherries in a good

state of preservation, and looking as though they would last several days longer; the quality is not first rate, because the texture is too firm, but it will be valuable on account of its lateness, and because it will bear carriage better than any other cherry—the name of Proudfoot's Begarreau was proposed. What will Mr. Downing say of this new fruit?

PROTECTION OF GRAPE VINES FROM ROSE BUGS—NO GO!

MR. EDITOR: The June No. of the Horticultural Review contains an article by Mr. A. M. Holt, of Conn., from which it might be inferred that the rose bugs "down east" are somewhat *high minded*. Now here in Illinois they are evidently less dignified in their habits, for what few grape vines we have, never have been raised from the ground by stake or trellis, yet they are annually nearly denuded of fruit or foliage by rose bugs.

M'WHORTER.

Pomme Roy Nursery, Ill.

REMARKS.—The rose bug has not yet made its appearance here, though its first cousin has attacked the grape vines, as noticed in a

previous number. The spread of insects is a curious study, and we should endeavor to prevent it as much as possible; two scourges are already very rife at Cleveland, O., the rose bug and a small black slug, which destroys the leaves. We must expect that these things will be carried from one part of the country to another, and it remains for us to endeavor to meet them, and we shall be obliged to bring all of our energy and intellect to bear upon the subject. The great idea with some of our best and most extensive cultivators is to *exterminate*, whether by boys or birds, or both, but be careful that the latter are not interrupted by the former, who should take whatever they leave.—Ed.

HEN MANURE.

MANY recipes are going the rounds of the agricultural press for preserving and preparing hen manure. This superior manure, if properly treated, is among the most valuable and is therefore entitled to the best care. Hen manure not only contains a constituent of ammonia in large excess, but also many of the inorganic constituents of plants, and if suffered to heat alone or if mixed with any of the alkalies, (even wood ashes) loses much of its virtues. The cellars under hen roosts should always be supplied with charcoal dust, or some other carbonaceous matter

capable of absorbing ammonia. Decomposed muck and plaster of paris will answer well. By this practice all the offensive gasses are absorbed, and the hens are not rendered unhealthy by breathing and being surrounded by deleterious gasses. Pip and other diseases are less frequent when plenty of carbonaceous matter is mixed with their dung as soon as voided. If ashes are required, they should only be composted with hen manure after its removal from the hennery, and not without covering the mass either with soil or some absorbant material.—W. Farmer.

REDUCTION OF NUMBERS.

Roses vs. Lindley, Rivers & Co,

DR. WARDER: In the August number of your Review, and in many other horticultural publications, are communications advocating the condemnation of most of the varieties of our old floral friends, the Roses. The cry is raised, and every one seems to echo it, "reduce the number of varieties." Dr. Lindley, the Jupiter Tonans of English horticulture, has issued his fiat. We are to have but twelve varieties! prodigious!!! Where will we stop—have we gone far enough—or are we not rather flying from one very silly system into another equally repugnant to plain common sense—if not more so. Let us have less dictation and more reasoning—fewer assertions, and more proofs, and we may, perhaps, in carrying out the reformation of rose catalogues, do something really useful.

The temperate zone, where we happen to live, is, as the generality of school-boys believe, a rather extensive tract. It contains a very great diversity of soils and climates, and horticulturists usually admit that no two localities are equally capable of producing any given variety of plant in exactly the same degree of perfection, therefore, the variety of Rose that originates in Paris or Bordeaux can scarcely feel quite at home near London with Dr. Lindley, while it may be a very valuable variety near Cincinnati with us. Some heretical Scotchmen may even be found who would prefer others to some of Dr. Lindley's favorite dozen, for the vicinity of Edinburgh, and I have not the slightest doubt that some impudent Irishman will raise serious objections to them in Galway—of course, it would be absurd to talk about Quebec or Copenhagen at all, yet I can not help thinking that I saw very poor Indian corn growing near London, and ex-

tremely wretched looking gooseberries in Kentucky—still it is a dangerous thing to contradict Lindley, Downing and Warder.

I lately received several catalogues of Roses from Europe—among them one from Mr. Rivers, who, by-the-by, is one of the apostles in the new movement. For the instruction of beginners he has marked several of the roses he considers best for general cultivation. Many of those varieties have flowered here, for years, and I believe all who have collections will admit that some of them as Baronne Prevost, Duchess of Sutherland, and others are very much inferior, for perfect and perpetual bloom, to varieties esteemed by Mr. Rivers only second rate, as Jaques Lafitte, Prince Albert, Madame Trudeaux, and Rivers' crimson perpetual. Cornet came to us with a high character, it is highly praised in Mr. Rivers' list, yet I find it the worst hybrid perpetual I have. Fulgorie and Lane, good roses with us, he has entirely excluded, and so of many other *selected* varieties. Many of our finest show flowers, such as Emma Dampière, are not very constant bloomers, are we then to throw away Edward Jesse, which is never out of bloom in summer—or Madame de Belfort, valuable for the fragrance and profusion of its flowers? Again some few of the very best roses in cultivation are hardly worthy of a place on some soils, some inferior in other qualities are valuable for the *duration* of their flowers—some are preferred for their rampant vigor, others for their dwarf and compact habit, and, superior to all other considerations, the various tastes of human beings must be gratified, and they can not be gratified by a dozen sorts of roses.

Some years ago, Mr. Sayers and myself undertook to prune down a long catalogue of

Dahlia. We retained none that could be dispensed with, and still we had about fifty varieties. Doubtless, a London florist would find we had rejected many of his choicest show flowers, and retained some he had discarded. So much for climate.

The American Pomological Congress have been engaged for some years in making a select list of the best Pears for cultivation in the Union. After discarding a great number, the list bids fair to amount to over fifty sorts by next September, and hundreds are yet to be decided on. Few anticipated this—most persons believing that two or three dozen would be the greatest number of the really fine sorts of pears. I do not believe that any intelligent American horticulturist now believes it possible to confine the list of Pears for culture, throughout the Union, to a dozen of the best varieties. How then are we to discard all but a dozen Roses? If Dr. Lindley, or any one else, can point out twelve sorts of Roses, having every desirable property of form, color, size, odor, and duration—all equally suitable for dwarfs, standards, trailers, climbers, and droopers—all equally capable, on their *own* roots, of giving a constant profusion of well-developed flowers through the spring, summer, and autumn—all possessing beauty of foliage and outline, good for forcing, capable of bearing rain and sun without much injury to the flower—and

all equally able to flourish under the suns of Texas or Andalusia, the frosts of Canada or Northern Germany—or, shall I say it, the fogs of London—then, indeed, we may begin to throw away the rest—having, of course, previously prevailed on the human race to fancy only the twelve shades of color, we may have settled.

Really it is somewhat amusing to find a man possessed of the great experience of Dr. Lindley, making such an oversight. Our shrewd American editors, Downing and Warder, are entirely excusable for following in his wake. Would it be outside the range of propriety to suggest to writers in general, and particularly mammoth editors, to take a more extensive view of the various attributes that constitute excellence, and of the conditions necessary to its production. Too often, when mere utility is sought, great differences of opinion often exist among them as to what may be best for any specified purpose. Yet they attempt to prescribe for the intellectual wants of the diversified forms of the human mind—every one of which, however cultivated, has its peculiar ideas of the beautiful—with as little consideration as they would use in prescribing for their own pleasures, and with a confidence which brooks no contradiction. With many excuses for daring to doubt the infallibility of Doctors, I take my leave.

M. KELLY.

STRAWBERRIES.

DR. WARDER: In the last number of Mr. Downing's Horticulturist, there are two letters on the Strawberry culture. The first writer appears to belong to the old school, as he makes no distinction between the sexes. The second letter divides them into two classes, Staminate and Pistillate. A better name for the first, would have been *Hermaphrodites*, as Staminate bear no fruit, or only a

chance, defective berry. In raising from seed, one half are usually of this character. Of the fourth class, I presume he has none. The fourth have blossoms, perfect in both organs. Some wholly defective in stamens, and some in pistils. These are very rare. Plants of this character, will, I believe, be found superior to all others.

Mr Buist is one of our most talented Hor-

ticulturists, yet, I believe he will not claim for his prize Hermaphrodite seedling, all that the writer in the Horticulturist claims for it.

When Mr. Buist brought this seedling into notice, he still had his English notions, not being a proselyte to the sexual doctrine. He is a man of close observation, and soon fully understood the subject. I believe his seedling is equal to the famous English Keen seedling, from which Mr. Keen made a fortune, but we do not deem the Keen worthy of cultivation, even as an impregnator.

I have always entertained the belief, that no Hermaphrodite could be raised, perfect in both organs, and bearing a full crop, of very large, perfect fruit. I do not readily change opinions. Yet candor compels me to admit, that Schneicke's Garden of Eden Hermaphrodite seedling, has for four years, borne a full crop of perfect fruit, and of a much larger average size, than Mr. Hovey's justly celebrated Pistillate seedling. I have hopes for the future, but some doubts. All Hermaphrodites, some seasons, bear a fair crop. The writer speaks of the fine bearing character of the Iowa. This plant I first cultivated. It was brought to me from the prairies of Iowa, many years since, by David T. Disney, Esq. I now keep four plants only. It will

not average one-fourth of a crop of perfect fruit. Another objection is, its vigorous growth. It soon roots out all other vines.

Tan I have discarded. It soon rots and renders the fruit dirty. In its green state, it injures the flavor of the fruit. I prefer the old covering, from which the plant takes its name, cut-straw. The writer's doctrine of some strawberries bearing well in crowded beds, I can not believe. I would as soon believe in the Rochester Knockings, and should have more witnesses to back me. Pistillate blossoms can not be impregnated, if closely crowded together, so that insects can not reach them, and from last year's observation, I believe Hermaphrodites also require insects. Our Horticulturists, who have raised the British Queen, which he lauds so highly, deem it of no value. I have not raised it. The writer praises Burr's Mammoth, for its fine flavor. It is of large size with us, but deemed of inferior flavor and bad color. At the East sugar must be scarce. Here, we prefer acid varieties, that require an abundant supply of sugar. The Old Hudson, so abundant in our market, is of this character.

N. LONGWORTH.

Cincinnati, Aug. 12, 1851.

AGRICULTURAL AND HORTICULTURAL FAIRS.

THE kindness of many friends in various places, has caused quite an influx of the schedules of premiums, and other such matters, which are accumulating on the table. They may be taken up at random, and will show the progress of events.

The second Fair of the Kentucky Agricultural and Mechanical Association will be held at Lexington, Ky., commencing on Tuesday, September 9th, and to continue five

days. In this exhibition Horticultural interests are subordinate to those of the meadow or field, the turf and the workshop—but some of us should go to encourage those who toil in the gardens and need sympathy.

Warren County Agricultural Society, will hold their second annual Fair at Lebanon, Ohio, on Tuesday and Wednesday, the 9th and 10th of September. The premiums amount to \$450, for a part of which, fruits

and flowers may compete—and as the ladies are to superintend this department, they may except fair play.

Clark and Madison Counties combine to form a strong society. Their Fair will be held in South Charleston, on the Xenia and Columbus Railroad, in the first week of October. The premium list is liberal, but as this is a great breeding and grazing county, they must chiefly encourage fine stock.

The State Agricultural Society of Michigan will hold their third annual Fair at Detroit on the last week of September, 24th, 25th, and 26th, at which liberal premiums are offered, and fruits and flowers are well esteemed by the judicious directors who formed the schedule.

It would afford us great pleasure to act with some of the committees upon that occasion, but other engagements will occupy most of us at that time, which is the same as that set by the

Ohio State Board of Agriculture, for our own Fair, at Columbus, where extensive arrangements are made for a splendid exhibition on a beautiful piece of ground. I am not pleased that the carpenter who served the board so well and trustily last year, should not have had an opportunity to exercise his experience gained in fitting up the grounds here, satisfied that his services last year were invaluable.

The fifth annual exhibition of the Maho-

ning County Agricultural Society, will be held on Tuesday and Wednesday, the 7th and 8th of October. Fruits and flowers are not overlooked.

Edw. Bonsall, jr., Wm. Ripley, jr., and Daniel Simons constitute the committee—may they have enough to do! The pamphlet, for which thanks are due to my good friend J. M. Edwards, is the fifth annual report of the Society, and contains an agricultural address by Wm. Little, Esq. whose dicta are often quoted among intelligent farmers.

Muskingum, Cuyahoga, and many other counties of our glorious State, are advancing in these fairs, and in all it is hoped that the Horticultural and Pomological department will become more and more prominent from year to year. Were it not for extreme modesty, the suggestion would be made that in the future, making out of schedules, it would be only right and proper to award a number of copies of the "Western Horticultural Review" to successful competitors for prizes, in the range of fruits and flowers. Think of it, Messrs. Committee men.

Many other Societies will hold interesting meetings this fall, at which the collections of fruits and flowers will be exceedingly interesting. The great State of N. York will have her jubilee on the 17th, 18th, and 19th of September, and our own Horticultural Society will meet in the first week of October.

PINE TREES.—MEALY BUG, Etc.

DR. WARDER: You erred in stating that I used soap suds in destroying Mealy bug on Pine trees, and other plants. Many years ago I found that common cold water, thrown with force from one of Ried's double acting syringes, which will send a jet of water forty

feet if necessary, was a more destructive, and less dangerous remedy than any other. Any wash having heat or chemical power enough to kill insects, *independent of mechanical force*, will be much more destructive to the tender leaves of plants in general. Mineral

poisons are as injurious to vegetable as to animal life, while vegetable poisons are seldom productive of injury to plants.

The same remedy I found efficacious against red spider, and white scale on plants, care should be taken, however, in syringing tender plants to avoid breaking the leaves, by lessening the force of the jet, and also to place the plants so that the soil in their pots will not be saturated with too much water.

A few of the Pine trees in the lower part of my nursery, were covered with mealy bug this spring. Some of Mr. Sayers's trees near the Reading road were similarly affected.

After a thunder storm, which occurred in the summer, I found my trees quite clean

—Mr. Sayers says he found his clean too—perhaps Mr. Heaver's were clean also. Sayers and myself, were stupid enough to imagine that the heavy rain had washed our trees clean of insects, until we read about Mr. Heaver's soap suds panacea. Now, we feel constrained to believe that the "influence" of Heaver's soap suds extended across the road to Sayers's, and possibly, also to mine, two miles distant, and to admit that the present healthy state of our trees, may be attributed to that influence.

M. KELLY.

NEW PUBLICATIONS.

SEVERAL new comers have made themselves welcome visitors within a few weeks. Among them, one of the first, heralded primarily by a large prospectus, is the *INDIANA FARMER*, an excellent sheet, in octavo form, which has made two issues from Richmond, Indiana—a great agricultural State, already famous for its fruit. It is ably conducted by D. P. Holloway and W. T. Dennis, and a prominent Horticultural department, under the guidance of friend J. C. Teas, of Raysville, will furnish some valuable articles for these pages, well worthy of reprinting—for the present, hear how they introduce themselves:

When a man enters, uninvited and unbidden, a room occupied by others, and unhappily finds no one present with whom he is acquainted, to introduce him to the company and vouch for his respectability, it is necessary that he should have sufficient boldness to give his name and state the object of his visit. Gentlemen of the agricultural press, we present ourselves unbidden in your company, and in the absence of a better medium, will introduce ourselves, and declare our business. * * * * Our business is to join you in the contribution of our humble abilities to advance the interests of agriculture, horticulture, and the useful arts—to

elevate the standard of labor, and place the farmer in that position which his occupation so pre-eminently demands he should occupy. We enter the lists but to join your company, and humbly assist in the good work in which you are already employed. We shall assume a modest position among the veterans of the press, and look to them for counsel, rather than attempt to lead off in the great enterprise of agricultural reform. Assuming this position, gentlemen of the agricultural press, we "hope we don't intrude."

They speak of the season and the crops as follows:

The season thus far has been unusually favorable to all descriptions of crops, and a more promising or abundant harvest has rarely been allotted to the industrious farmer, than the one just read to fall before the sickle.

Seasonable rains and warm weather have brought forward vegetation with great rapidity.

In this vicinity, and north of us, wheat was badly frozen out during the winter in some locations; but the crop will be a full average, as far as our knowledge extends. Corn is larger and more promising than we have ever before seen it at this season of the year. Oats and grass very good, and flax never better.

Apples are "few and far between;" cherries few, but of good quality.

And then, the way in which they notice this modest periodical itself, is altogether delightful.

THE PENNSYLVANIA FARM JOURNAL.—Welcome, truly welcome, is this new laborer in the editorial field, hailing as it does, too, from my old natal land—and from Lancaster county, "the Garden Spot" of that glorious Keystone State, with its fertile valleys—edited, too, by a sterling naturalist, aided by a corps of most worthy correspondents, several of whom are known,—some since boyhood, some only through their quills,—but all making such a respectable "Journal," that I feel quite proud to have been once a *Pennamite*. The leading editorials give valuable information respecting destructive insects; and some of them will gladly be transferred to the columns of this periodical, which has been rather deficient in entomological articles.

Thanks to the parties concerned for four numbers, just received, and which will be cheerfully responded to by exchange. Go on, friends! Let not our dear old Pennsylvania fall behind her sister States in the race. Show the world that you are not inferior to them. Agricultural education claims deserved attention; and it is to be hoped it will receive a valuable impetus from the "Journal." The pomological department

receives valuable aid from Dr. Brinklé, well known in the west as the able President of the Pomological Congress of the United States, which met here last season. Other laborers, also, assist in this department; and Buist, Fulton, Eshleman, and others, known to horticulture, appear among the collaborators. Success!

THE AMERICAN FARMER, of Baltimore, Md., is no new work, but has recently commenced a new volume—the seventh. In it are found the invaluable essays, on various practical subjects connected with agriculture, which emanate from Edmund Ruffin, of Virginia—a man whose direct, common sense accounts, carry great weight with them. In the August number is an article upon the cultivation of the strawberry. "Oh! that mine enemy would write a book," has been said. I rather say, Oh! that our friends and brothers in horticulture would come and see our beds and fruit in May.

THE BELMONT FARMER, Bridgeport, Ohio—"Thrown broad-cast to the winds—we ask no pay, but a reasonable share of abuse; and that we hope to merit." Among various topics, he reminds us of his curculio plan, which is, to have plenty of the kinds they prefer, and thus hope to see the other sorts escape. This is at least charitable—its success is doubtful. This work is small, and shall have a little notice; but do exchange, Affleck—we can stop if we tire of each other's company.

Several catalogues and other papers have accumulated in my absence, and should have been noticed, if time were not so very pressing.

CINCINNATI HORTICULTURAL SOCIETY.

Prepared from the Minutes by the Temporary Secretary.

THE meetings of the Horticultural Society during the past month, have been unusually uninteresting. No business of much importance was transacted, and no exciting discussion prolonged the deliberations of the Society. This uncommon state may be partly attributed to the soporific tendency of the weather; but a more obvious cause, is, perhaps, the absence of several of our most brilliant rhetoricians, now and recently rejuvenating themselves with the breezes of the North. As the destroying frosts of the spring, and continued drought of the summer, have left us with a very reduced crop of Fruit, and have also retarded or impaired the growth of most of the Flowers, generally

so profuse at this period of the year, the weekly exhibitions have been of the most meager character, and confined chiefly to the productions of a few of our most zealous cultivators. Vegetables, no where produced in greater abundance than in our markets, are seldom exhibited by the members of the Society at our weekly meetings, and still more rarely by the market gardeners, many of whose productions, exposed for sale in the city, evince a high degree of skill, and certainly are very much superior to most of the articles which obtain prizes at our exhibitions. Some further efforts should be made to induce those able cultivators to frequent the meetings of the Society, and explain

their mode of culture, for the benefit of amateurs. Too much of the time and means of the Society have been occupied in directing the attention of the members to objects of mere ornament, to the comparative exclusion of vegetables. The list of premiums this year is miserably small for vegetables, (only about \$100, in a schedule of over \$800—most of which is awarded to flowers,)—offering few inducements to growers who can not afford to live on mere glory.

The Library Committee, after eight months' meditation, have at length issued an order calling in all the Society's books, preparatory to making their first report on the state of the Library—rapid progress.

The Fruit and Vegetable Committees have, in the main, attended to their duties, especially to the fascinating labor of tasting the fruits on exhibition. The Committee on Flowers have consistently abstained from the performance of any of their duties, and committees pro tem were necessarily appointed whenever flowers were shown at the meetings.

ARTICLES EXHIBITED.

PEARS—The principal exhibitor of this fruit has been Mr. McWilliams, whose orchard seems to have escaped, partially, the effect of spring frosts. He has brought forward White Doyenne, very good; Bartlett, delicious; Seckel, Summer Bonchretien, Julienne, and Belle de Flanders, all good;—and has exhibited some or all at every meeting during the past month.

N. Longworth sent some very fine Bartletts, Aug. 8th; and L. Rehfuess, Summer Bergamotte, same day; S. Rintz, Summer Bergamotte and Autumn Superb, and Fulton, the latter good flavor, at different meetings; and W. Orange, Windsor and Bartlett, 26th July.

APPLES—The only sorts exhibited were Early Bough and Sweet June, by S. Rintz; and Summer Queen, by Mr. Mayhugh.

PEACHES—Yellow Red Rarerijs, Lemon Cling, and another, the two first of excellent flavor, were shown by S. M. Carter, Aug. 23d.

GRAPES—Catawba, well ripened and good bunches, were produced by H. Duhrne, Aug. 16th; and Isabella, ripe, but as usual, with a sprinkling of green berries, by J. G. Anthony and E. Harrison, on the same day. Black Fox, of powerful odor and great stringency, were brought by Mr. Lewis, Aug. 9th; and a bunch of hot house Grapes, by N. Longworth, Aug. 9th.

FIGS were shown, July 26th, by Mr. McWilliams. Also, Berries of the Mountain Ash.

CHERRIES—J. P. Foote produced a dish of good, well ripened, common Morello, July 26th, proving how much Cherries may be improved by thorough ripening.

FLOWERS—The principal contributions were a basket of cut Flowers, including the new and pretty Angelonia Gardneriana, two seedling Dahlias, (his own raising), Roses, Verbenas, etc., from S. S. Jackson, on the 2d Aug. Plants, grown and flowered well, of Tabernaemontana coronaria, Rochea falcata, Hypericum shinense, Lotus, Jacobus, Cuphea platycentra, Veronica Lindleyana, and four China Asters from W. Heaver, Aug. 16. Dahlias, a dozen fine flowers, several of them new, viz: Rival, Harriet Nikay, Hippolyte, Miss Blackmore, Rosetta, White No. 1, Toison d'Or, Queen of England, Le Tour d'Auvergne, Indispensable, Belle de Donc, and Gaiety, from John Sayers, Aug. 23d. A basket of flowers, Aug. 23d, from Isaac C. Ferris, containing sixteen choice sorts Dahlias, many new; twelve sorts Verbenas; three of Fuchsia, good varieties; two sorts Lantana, and two of Honeyuckle; also, Rondeletia speciosa, Torrenia asiatica, Asclepias tuberosa, etc. Paul Joseph Rose, from S. M. Carter, Aug. 23d. Dahlias, Cleopatra, White No. 1, Belle de Donc, Madame Zahler, Vis-

count Reassieur, and Deedemona, from John McFadden, Aug. 23d. A basket of flowers, of Roses, Verbenas, Hoya carnea, etc., from George Swanson, gardener to N. Longworth, on the 16th, and Nymphaea alba, from the same, 8th Aug. Four sorts Portulacca from T. Winter, Aug. 16th. A Helianthus from H. Ives, on the 2d. A fine specimen plant of Pancratium rotatum, in flower, from J. Lea, Aug. 9th, and pretty bouquets of Roses, Pelargoniums, etc., from Mrs. Bickham, July 26th, and Aug. 2d, and one from M. McWilliams, Aug. 16th.

VEGETABLES—Potatoes, of rare or new kinds, were shown by George Watson, Aug. 2d, viz: Ashleaf Kidney, Walnut Leaved Kidney, Brough's seedling, Watson's seedling, Pheasant-eye, and Radical, reputed one of the best in England. Tomatoes: A grand bunch was shown by S. S. L'Hommedieu, and some very good ones by H. Ives, Aug. 2d. Pods of Martynia proboscoides, for pickling, and Shoe-peg Corn, were brought by Mrs. Bickham. Sugar-loaf Cabbage, weighing 6½ pounds each head, July 26th; Purple Cabbage, Aug. 9th; and Welcheren Broccoli, Aug. 23d, were shown by H. Ives. Lima Beans, both samples very good, were shown by S. M. Carter, and M. Rice, gardener to J. Longworth. And three sorts of fine Squash, eight sorts of Pepper, some fine red Celery, and the new excellent pink Tomato, by G. Swanson, Aug. 16th.

INSECTS—Lytta vittata, and another allied species, were found by T. V. Peticolas, regaling themselves on the foliage of his dahlia and tomato plants. He destroyed most of them by hand-picking, and recommended that as the best plan. He brought some living specimens to the meeting, Aug. 2d. They are old and well known enemies to gardeners.

CEREALS—D. K. Cady exhibited Hedge Row Spring Wheat, and partially blighted ears of other varieties of Wheat, Aug. 23d.

M. KELLY, Sec. pro tem.

THE WINE-GROWERS' ASSOCIATION

HELD a monthly meeting at the Horticultural Rooms, Aug. 2d.

The President, Dr. Mosher, having taken the chair, called on the members for information on the present state of the Grape crop.

Mr. Rintz said his Grapes looked well—that he had no rot, and that he would have about half a crop.

Mr. Buchanan said his Grapes were in fine condition—that he had no rot, except where the berries had been stung by insects. He advocated great vigilance in destroying the insects now, while our vineyards are on a limited scale, as it would be much more difficult to destroy their progeny at a future period, when our vineyards will have become greatly extended. He deprecated deep and late digging or ploughing between the Grapes, on account of the injury their roots sustain, in dry seasons especially, from this process.

Dr. Mosher stated that a portion of his vineyard, which had suffered from late digging, and on which the foliage had assumed a yellowish color, was rapidly recovering under the influence of the recent moist weather.

On motion of R. Buchanan, a Committee was appointed to examine and report upon the condition of the vineyards of the members of the Association, and others in this neighborhood. The Committee appointed were, D. Mosher, Chairman; R. Buchanan, M. McWilliams, S. Rintz, Dr. Shaler, Dr. Rehfuess, and T. V. Peticolas.

Adjourned, to meet at Doctor Mosher's, Latonia Springs, Ky., on the first Saturday in September, at 3 o'clock, P. M.

M. KELLY,
Secretary pro tem

METEOROLOGICAL TABLE.

CINCINNATI, JULY, 1851.

THERMOMETER			WEATHER.			RAIN.
Date.	Mini.	Maxi.	Sunrise.	Noon.	Sunset.	
1	64	79	cloudy	clear	clear	
2	60	81	do	variable	do	
3	67	86	variable	clear	do	
4	62	81	clear	do	do	
5	62	84	do	do	do	
6	65	82	var. rain	variable	do	.25
7	76	90	cl'y, rain	clear	variable	.05
8	70	95	clear	do	cl'r, rain	.30
9	75	93	clear	do	rain, var	.20
10	75	96	variable	do	rain, cl'r	.40
11	71	89	clear	do	clear	
12	71	91	do	do	do	
13	75	98	do	do	do	
14	75	92	do	do	do	
15	73	94	do	do	do	
16	76	96	do	do	rain, cl'r	.05
17	73	95	do	do	cl'y, rain	.35
18	71	88	cloudy	do	clear	
19	71	80	clear	do	do	
20	61	79	do	do	do	
21	61	84	do	do	do	
22	64	89	do	do	do	
23	74	85	cloudy	variable	rain	.30
24	73	90	do	clear	clear	
25	70	93	clear	do	do	
26	76	97	do	do	do	
27	80	98	do	do	cloudy	
28	78	85	rain	do	do	.35
29	70	80	cl'y, rain	cloudy	do	1.00
30	69	83	do	variable	variable	
31	65	85	clear	clear	clear	

Total rain, inches

Mean temperature of the month.....79.12

Do do July 1850.....81.65

Do do do 1849.....76.42

Do do do 1848.....73.86

Do do do 1847.....74.42

Do do do 1846.....76.

Do do do 1845.....75.84

Do do do 1844.....78.47

Mean temp. of July for the above 8 years 76.97

The mean temperature in all these observations, is the medium of the minimums and maximums.

Clear days in the month.....14

Variable (cloudy at times).....16

Cloudy (sun not visible).....1

Highest temperature in the month,.....98°

Lowest do do do.....60°

Range,.....38°

REMARKS, WINDS, ETC.

1. Light N W.
2. Calm; calm; light S E.
3. Light S W; light W. Blackberries.
4. Light N W; light E; calm at eve.
5. Calm; light S E.
6. Calm; light S W. Thunder.
7. Light S W and var.; calm at eve.
8. Calm; light S W; light N; rain at night.
9. Calm; light S W; brisk S W; squall W of 10 min.

10. Light S W; brisk N W; calm. Thunder.
11. Calm; light N; calm. Corn.
12. Calm; light S W; calm.
13. Calm; light S W and W; brisk W; calm.
14. Light E; light N; calm.
15. Light S E; brisk S W; light S W. Cantelopes.
16. Light S W; brisk W.
17. Light S W; brisk W; squall N of 10 minutes, and light W.
18. Light S W; brisk S W; light S W.
19. Light W; brisk N W; Light N W.
20. Light N W; calm at night. Tomatoes, open ground.
21. Calm, light S W. Peaches.
22. Light S and S W; calm at eve.
23. Calm; light S; brisk S; squall a few minutes, thunder.
24. Light S W; brisk W; light W; calm at eve. Water melons.
25. Calm; light S; brisk S W. Sweet potatoes.
26. Brisk S W, (sun 120 deg.) Martin's depart.
27. Light S W; brisk S W; (sun 123 deg.) Thunder.
28. Light S W, varying to W and E.
29. Calm; light E and N E.
30. Calm; light N; calm. Fire flies depart.
31. Calm; light N. Wild cherries.

OBSERVATIONS.—The Thermometer has never before—so far as my record extends, 14 years—ranged so high as 98 degrees. The extreme heat of those two hottest days was much mitigated by the pleasant breezes. There is a remarkable deficiency in the quantity of rain which has fallen in the last seven months, compared with the same months in former years, thus:—

January to July, 1851, inclusive, gave 20.70 in.

Do do 1850, do do 34.82

Do do 1849, do do 34.81

Do do 1848, do do 29.74

Do do 1847, do do 34.85

The usual quantity of rain and melted snow here, is about 50 inches per annum.

Many showers and little rain form a peculiar feature in the meteorology of the last three months.

This is the hottest July, except the last, that we have experienced since 1838, when the mean temperature was 79 degrees.

The heat indicated by the sun on the two hot days, of the 26th and 27th, being no more than 120 and 123 degrees, can only be accounted for by a slight haziness of the atmosphere; no clouds intervened. The mercury in the sun on days of less mean heat has indicated over 140 degrees.

THE FIREFLY usually makes its appearance here about the 10th of June, and leaves about the 10th August;—having departed earlier than usual this season; a few of them may be seen a week or so later.

THE MARTIN usually makes its appearance here about the 20th of March, and leaves about the 20th July; some of them are usually detained later, from various causes, an instance of which I will relate:—In walking up East Front street, near Ludlow, in August, 1849, I heard the voices of a pair of those birds passing over me, and being desirous to know what could have detained them several weeks after their comrades had departed, I watched their course and observed that they passed over a barber's shop, and appeared to stop in the rear of it. I found their young were caged, and held prisoners, and the parents fed them: it appeared that they were owned by a boy, who was absent; I furnished the barber with the means to purchase their liberation, which effected, to the great joy, no doubt, of the parties concerned, and much to my regret that I could not wait to witness the joyous reunion.

JOHN LEEA.

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